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Military Intelligence

PROFESSIONAL BULLETIN

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TOOLS OF THE TRADE

FROM THE EDITOR

Military Intelligence

Apply, Validate, and Disseminate

This issue of ***Military Intelligence***, "Tools of Trade," is a timely introduction to some of the doctrine, organizations, and equipment that make division intelligence and electronic warfare (IEW) operations happen. The United States' commitment of the 1st Armored Division to peacekeeping operations in Bosnia provides the Military Intelligence Corps an excellent opportunity to apply and validate our latest doctrine, organizations, training, and equipment. We will test our doctrinal principles of commander driven, synchronized, tailored, split-based, and broadcast intelligence operations. We will see how well our institutional and unit training prepared intelligence soldiers for real-world operations. We will measure the promise of new systems like the All-Source Analysis System and Joint Surveillance Target Attack Radar System against their contribution to successful ground operations. How well we learn from this experience will depend upon intelligence soldiers, from private to general officer, recording and sharing their experiences with others in the intelligence community. Commanders in particular must make after action discussion and reporting an integral part of their standing operating procedures and orders. For the Military Intelligence Corps to improve its tools of the trade and execution of intelligence and electronic warfare operations, those who have gained new experience and knowledge in our trade must share it. The staff of the ***Military Intelligence*** bulletin stands ready to assist you in presenting and disseminating your valuable experiences and lessons learned.

Now on the Worldwide Web

The ***Military Intelligence Professional Bulletin*** with the help of Master Sergeant Stacy Smith, 111th MI Brigade, and Staff Sergeant Ken Taylor, Office of the Deputy Assistant Commandant, is now on the Fort Huachuca Homepage (http://huachuca-usaic.army.mil) of the Worldwide Web. Although we still have some work to do on our Web page's style and content, we have begun to apply the potential of the Center Without Walls to improve our ability to keep intelligence professionals informed.

Michael C. Taylor

1996 Worldwide CSM/SGM G2 Conference

The U.S. Army Intelligence Center and Fort Huachuca will host the **1996 Worldwide CSM/SGM G2 Conference** at Fort Huachuca, Arizona, from 12 to 16 February 1996. The theme for this year's conference is "Yesterday, Today, and Tomorrow's Leaders: Paving the Way to the 21st Century." The conference action officer is Sergeant Major Long; you can reach him at (520) 533-5774 or DSN 821-5774. The point of contact for administrative matters is Sergeant Bolden at (520) 533-1152, DSN 821-1152, or E-mail bolden%hua1@huachuca-emh11.army.mil.

The Fort Huachuca Billeting Office will not have rooms available during the conference. The Windemere Hotel and Conference Center (1-800-825-4656), Sun Canyon Inn (1-800-822-6966), and the Thunder Mountain Inn (1-800-222-5811), all located in Sierra Vista, Arizona, have rooms available for conference attendees. Those planning to attend must pass both their collateral and SCI clearances to this installation through their security offices. Forward collateral clearances to Commander, U.S. Army Intelligence Center and Fort Huachuca, ATTN: ATZS-PSS-P, Fort Huachuca, Arizona 85613-6000 or call (520) 538-2105 or DSN 879-2105. Send SCI access certification via SSO channels to SSO Huachuca or call (520) 538-6808 or DSN 879-6808.

Writer of the Quarter

The ***Military Intelligence Professional Bulletin*** is pleased to announce the **Writer of the Quarter** (January-March 1996) is Captain Michael W. Shellhammer for his article, " Lessons Learned from Operation RESTORE DEMOCRACY." Congratulations to Captain Shellhammer and thanks to all of our authors for their great articles, book reviews, and letters to the editor. It is contributions like yours that make this bulletin the professional forum for the Military Intelligence Corps.

How to Submit an Article

1. Select a relevant topic of interest to the military intelligence community.
2. Write an outline to organize your work. Put the bottom line up front and write clear, concise introduction and conclusion paragraphs.
3. Follow proper rules of grammar. Consult **DA Pamphlet 600-67** or William A. McIntosh's **Guide to Effective Writing**, if necessary.
4. Maintain the active voice as much as possible. Write "Congress cut the budget" rather than "the budget was cut by Congress." (See **DA Pamphlet 600-67, Effective Writing for Army Leaders**, paragraph 3-2,b[1].)
5. Send the article to Commander, USAIC&FH, ATTN: ATZS-TDL-B, Fort Huachuca, AZ 85613-6000. Please include with your article—
   a. Pictures, graphics, and crests with an adequate description and photographer credits. (We can return photos if so requested.)
   b. A computer diskette with the article in Word Perfect, ASCII, Microsoft Word or MultiMate.
   c. A short biography with the full names of all authors of the article. The biography should include each author's current duty position, other related assignments, and civilian education. (Tell us if we can print your telephone number and E-mail address with the biography.)
   d. A cover letter with work, home, and E-mail addresses and telephone numbers, stating your intent to publish the article.
   e. A release by your local security office to ensure your article is unclassified, nonsensitive, and releasable to the public.
6. Remember, content is the most important part of your article. When in doubt, **send us your article**—we can work out the details.

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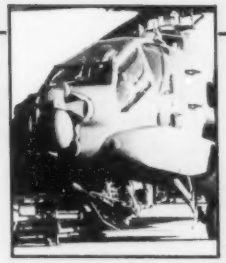

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VANTAGE POINT

by Major General Charles W. Thomas

U. S. Army photo

The A-series division table of organization and equipment (TO&E) that emerged from the military intelligence (MI) Gulf War retrospective is a better balanced organization than its 1990 predecessor. While there is less organic signals intelligence (SIGINT), there is more countervailing access to SIGINT through broadcast intelligence and the emerging Ground-Based Common Sensor (GBCS) systems. The divisional direct support (DS) MI companies in support of ground maneuver brigades provide this balance by vertically integrating all-source intelligence to the brigades.

All-Source Collection

Access to systems outside the brigade is enhanced by the new architecture that includes the All-Source Analysis System (ASAS), the Joint Deployable Intelligence Support System (JDISS), and associated communications systems. Through the Common Ground Station the DS MI company can provide the supported brigade with available Joint Surveillance Target Attack Radar System (Joint STARS) information that can highlight enemy unit movements and serve as a cue to other sensors. One of these sensors is the unmanned aerial vehicle (UAV). The UAV provides the best near-real-time imagery available to the warfighter. UAV support is tiered (by echelon) with system access and control ranging from echelons above corps to brigade. The specific vehicles are yet to be determined, but the Army leadership views the UAV as critical, and we can be sure that this essential system will remain in our architecture.

The intelligence balance further improves with the human intelligence (HUMINT) capability that is part of every DS MI company. Counterintelligence and interrogation remain important, particularly in the force projection nontraditional missions like Somalia, Haiti, and what we face in Bosnia, where the need for HUMINT is high. In fact, often it is the most critical collection capability we have, especially against unsophisticated, technologically ill-equipped opponents.

The GBCS system of the general support MI company replaces several ground-based SIGINT and electronic warfare systems, consolidates functionality of the old systems, and is a technological step forward. GBCS, in concert with the divisional Advanced QUICKFIX helicopter, provides more detailed and accurate SIGINT than ever before.

ASAS Provides the Fusion

Again, not much organic collection belongs to the brigade, but the analysis and control team of the DS MI company has enormous capacity, primarily through the ASAS architecture, to pull timely intelligence and accept broadcast products efficiently. ASAS merges the information of the tactical systems with information from higher echelons, including national level, to optimize the clarity of the intelligence picture. Equally important to this balance is the integration of all reconnaissance, intelligence, surveillance, and target acquisition (RISTA) capabilities in the division.

The RISTA effort is a critical source of information for the warfighter. First, we focus the systems by illuminating the threat for the commander. Second, the ASAS correlates and places into context the collected information obtained through RISTA. Finally, following the correlation, we make target recommendations, based on our analysis of the enemy situation, and feed these targets through ASAS directly to the appropriate warfighting system. The vertical and horizontal proliferation of ASAS makes it possible to more quickly add to situational awareness and targeting databases. While the current generation of ASAS makes this a fusion of multiple inputs from numerous sensors and human sources, it is only the

first step on the path to vastly greater efficiencies in battle space visualization.

Employing the Architecture

The efficient use of this architecture requires carefully refined tactics, techniques, and procedures (TTP) with accompanying training. Divisional units develop most TTP through training programs; G2s, S2s, and MI battalion commanders develop and orchestrate them. Frankly, our MI technical architecture will not work without these homegrown TTP efforts and training. We cannot do this alone from Fort Huachuca—it has to be a cooperative effort with the field. When it is done with resourceful determination, this architecture not only works, it works with dazzling efficiency. It truly draws together all of the elements of RISTA—making the whole division part of the process.

Our Responsibility

MI officers, noncommissioned officers (NCOs), and civilians have an obligation to learn our architecture and refine the TTP that implement it. It will not work without a focused effort. We will not be ready for the ever-increasing pace of change in our architecture's technical capability if we cannot use the efficiencies currently available.

I am convinced that the high quality officer and NCO corps that we have today are up to this challenge. If you are not, then stand back for those who will take it on. It is too important to allow deterrents—it is a very real leap into Information Age warfare.

ALWAYS OUT FRONT!

CSM FORUM

by Command Sergeant Major Randolph S. Hollingsworth

U. S. Army photo

After visiting the many commands and talking with lots of soldiers, noncommissioned officers (NCOs), and their leaders, I have seen the tremendous capabilities and initiative inherent in our military intelligence (MI) NCOs. At the same time, I have noticed that the challenges our soldiers face are increasing in frequency and complexity. This is complemented by organizational and technological changes that bring into focus the need for raising their levels of technical knowledge and skills. NCOs need these increased levels of knowledge and skills to integrate a new generation of sophisticated systems and doctrine into the Intelligence Battlefield Operating System. Our jobs as NCOs is to make the systems work!

To meet these challenges successfully, the NCO has a major role to play. First, for NCOs to be effective, they must be technically and tactically competent. Second, they must be leaders and trainers at all times. With this in mind, I want to emphasize the importance of NCOs in making the steady transition to the new systems and doctrine.

Technical and tactical competence is the bread and butter of all NCOs. You cannot effectively lead or train if you do not "Be, Know, Do." In particular, I challenge all MI NCOs to focus on their proficiency in the major system that they operate or supervise, whether a collection device, interrogation team, motor vehicle, or the All-Source Analysis System (ASAS). Plan to integrate the systems into your routine and make it happen. The price of this integration will be a great deal of effort and naturally a few mistakes. Make the mistakes and learn from them now, rather than on some future battlefield where the price is blood. The direct benefit derived now will be the discovery of new capabilities and limitations in ourselves, our soldiers, and our systems.

One concern I have is for the soldiers who operate our powerful information systems. I know that in order to maintain a unit as fully mission capable, it will require solid and strong leadership from the com-

mand sergeants major, first sergeants, and senior NCOs. Effectively employing the ASAS, for example, will require a true positive commitment, leadership, and a "can do" attitude to make it work. This new system is a real challenge because the skills and knowledge that enable us to succeed require a high degree of familiarity and experience with it. I have seen some outstanding leaders emerge as a result of their dedication and professionalism to obtain this familiarity. The point is that once these systems are given to us, our mission is to make them work! Just emphasize what you can do, not on how hard it is or what it cannot do.

All NCOs at each level need to ask themselves some basic questions about their focus. Do they have the right amount of realistic hands-on training? Do they understand the necessary context and doctrine? Have they planned for cross-training, practiced interoperability, and performed crew drills? These are the fundamental elements of any plan to develop and maintain a team's proficiency. This proficiency is the cornerstone of technically and tactically competent NCOs.

The officer will concentrate on the planning and resourcing of a mission; the NCO will direct the team and soldiers in the tasks. The soldier will concentrate on operating the tools of the trade. This means that the NCO's primary duty is to integrate, take on board, and focus the new tools of the trade. This is the concept on which our Army has been based—a focus on getting the mission accomplished!

There are many techniques and procedures for leading and training. Each option has its pluses and minuses. But the bottom line is, "Build your team, train your team, and care for your team." It is the best guidance we can give our professional NCO for today and the future.

I would like to acknowledge Master Sergeant Michael F. Fallon for assisting me in writing this column. Thank you for a job well done!

ALWAYS OUT FRONT!

LETTERS

To the Editor:

We take issue with Major Lamberson's letter to the editor (July-September 1995), particularly where he states that identifying the enemy's center of gravity is a frivolous matter for battalion and brigade S2s. We contend that it is critical and the most important intelligence the S2 provides his commander. If the S2 does not identify the center of gravity, then the commander cannot focus his efforts. If the S2 omits the center of gravity, he infers everything the enemy has is important. If everything is important, then nothing is important. When the S2 overlooks the center of gravity, he forces the commander and his staff to piecemeal their effort.

However, if the S2 correctly identifies the center of gravity, then all friendly effort can focus on the one entity that will ensure enemy defeat. When the staff focuses on the center of gravity, their efforts are synchronized. Synchronization allows employment of the battalion's battlefield operating system at the critical time and place using its full synergistic effect.

This concept is true at all echelons. The battalion S2 has every reason and obligation to identify the enemy's center of gravity. For example, if the friendly battalion is to attack an enemy company strongpoint, that strongpoint defense has a specific center of gravity. There is one crucial element that the enemy commander will rely on for success.

If the S2 identifies this, then the friendly commander can mass his effects against it. Defeating the center of gravity defeats the enemy. Therefore, this process allows the friendly effort to concentrate on the one sure thing whose defeat will directly correspond to friendly mission success.

Identifying the enemy's center of gravity is not hard. Each situation and possible enemy course of action is analyzed. It is important to think as the enemy commander thinks: what is *he* relying on for success? Once identified, this center of gravity is broken down into its parts or high value targets. With this information, the commander and S3 can develop a plan that targets the enemy's critical structure. If the S2 fails to or incorrectly identifies the enemy's center of gravity, it dilutes the friendly effort.

Captain Lisa Bennett and
Captain Bruce Niedrauer
Fort Huachuca, Arizona

To the Editor:

Throughout history, formulaic thinking has been the high road to military disaster. The French outnumbered the British by odds of over 3:1 at Agincourt, but numerical advantage turned out not to be the deciding factor, and the prevailing idea that armored cavalry would always defeat infantry proved wrong.[1] In 1806, the army of Prussia had one of the most impressive reputations in Europe, but Prussia's mastery of 18th-century "chessboard warfare" could not save it from Napolean's onslaught.[2] The Wehrmacht managed to smash through France's defenses in 1940, not because

Germany possessed any superiority in either numbers or quality of men and machines, but because the French had anchored their strategy upon a rigid and misguided concept of warfare[3] (the Maginot mentality). A possibly apocryphal story tells that when President Nixon took office in 1969, members of the new administration applied a computer model to determine how long it would take to win the Vietnam war and, after entering data concerning body counts, kill ratios, gross national products and the like, received the answer: "You won the war in 1964."[4]

This fallacy of rigid and abstract thought is not dead. In our opinion, such false logic seems especially flagrant among the political scientists who attempt to analyze strategic affairs using what they call "formal modeling" or "quantitative methodologies." In the April-June 1995 issue of the ***Military Intelligence Professional Bulletin***, Captain David Resch introduces readers to those techniques. However, we urge military intelligence professionals to approach academic theory with caution.

The Nature of the Theory

One should not confuse formal modeling with less pretentious statistical methods, such as operations research. Those who practice quantitative methodology would reduce all of war, indeed all of human affairs, to mathematical equations. Quantitative theorists aspire to formulate what they define as "scientific" laws of human behavior, with the ultimate goal of answering political questions in the same definitive way that natural scientists discuss the activity of subatomic particles. This quest has taken many forms, but all of its variants use the same underlying technique. Researchers make a series of assumptions about the nature of strategy and politics, so that they may then express a real-world situation in terms of numeric variables. Then, such researchers enter these variables into the formula they have created and solve the equation in order to predict the outcome of strategic events.

Mountains Without Molehills

Although quantitative modeling claims to be "objective" and "scientific," all of its variants rest upon the assumptions of the modelers. Furthermore, once one accepts a model, one gives up much of one's ability to test these assumptions against reality. In order to turn human events into numbers, researchers must translate real-world phenomena into arbitrary symbols. Therefore, these models inevitably reflect the intellectual prejudices of their inventors. If, for instance, the French general staff had made a model to predict the events of a German invasion in 1940, we can safely assume that the resulting model would have produced results reflecting the assumption that the defensive would always be the strongest form of warfare.

The assumptions formal modelers make about human psychology seem especially questionable. Most current theories in quantitative political science rely on the idea that people behave as what economists call "rational actors." According to the "rational actor hypothesis," people make decisions by calculating the relative costs and benefits of different options available to them and then take the path which maximizes their own self-interest. Differences in culture, political system, or individual character affect military or political behavior only to the extent that they reflect perceived self-interest. Moreover, political scientists tend to interpret rational-actor theory in a rigid fashion, which denies the existence of any altruistic motivations such as honor, duty, or community spirit.

Furthermore, in the real world, the costs and benefits of each "option" are often blurred. If commanders can improve their ability to carry out operations, they can completely rearrange the "cost-versus-benefit" analysis. Even if we accept the dubious premise that all human options come down to economic calculation, the real difficulty in military operations (or politics) lies in the details of carrying out those options. This, perhaps, is the meaning behind Clausewitz's remark that although everything in war is simple, the simplest things are difficult.

Captain Resch sums up the opposition to quantitative analysis by citing Mr. James Finley's intentionally narrow criticism of the method. With all due respect to Mr. Finley's perfectly reasonable observations, we prefer to invoke others in our critique. The nuclear strategist Bernard Brodie, for instance, notes that while intangible issues of morale, political ideology, and national will may decide wars, these ideas do not fit nicely into models. Therefore, those who find models appealing too often end up shunting these factors aside. As Brodie wrote about his experiences at RAND—

Within RAND itself there was a quiet but strongly-felt differential between those who knew how to handle graphs and mathematical symbols...and those who merely knew how to probe political issues. Elegance of method is indeed marvelously seductive, even when it is irrelevant or inappropriate to the major problems.[5]

Professor Hedley Bull wrote what has become the classic modern criticism of such methods. Dr. Bull notes that—

I know of no odel that has assisted our understanding of international relations that could not just as well have been expressed as an empirical generalization. This, however, is not the reason why we should abstain from them. The freedom of the model-builder from the discipline of looking at the world is what makes him dangerous; he slips easily into a dogmatism that empirical generalization does not allow, attributing to the model a connection with reality it does not have....He has provided an intellectual exercise and no more.[6]

Crystal Balls

Those who employ the quantitative approach to political science

(Continued on page 50)

Directing Intelligence Operations III:

The G2's Intelligence Synchronization Plan

by Major John F. Lady

Editor's Note: See the July-September 1995 issue of the ***Military Intelligence Professional Bulletin*** *for Directing Intelligence Operations I and II.*

Intelligence synchronization first established itself as a useful technique in 1991 during Operation DESERT STORM when the G2, Third U.S. Army, employed it with great success.[1] Intelligence synchronization first appeared in Army intelligence and electronic warfare (IEW) doctrine in 1992 with the publication of **FM 34-8, Combat Commander's Handbook on Intelligence**. This idea did not receive much doctrinal emphasis, however, until **FM 34-1, Intelligence and Electronic Warfare Operations**, and **FM 34-2, Collection Management and Synchronization Planning,** in 1994. These manuals introduced intelligence synchronization and related terms like the intelligence synchronization matrix (ISM). Unfortunately, these manuals have focused primarily on a by-product, the ISM, without explaining the planning process that must precede an ISM. Effective intelligence synchronization requires the G2 to develop and execute a synchronization plan.[2]

How well does the Army conduct intelligence synchronization? Former Chief of Staff General Gordon R. Sullivan (Retired), delivered this indictment in September 1992, *"We often fail to follow up on PIR, leaving key intelligence questions unanswered."*[3] Although he wrote these words before the 1994 manuals appeared, three years of Battle Command Training Program (BCTP) Warfighter Exercise (WFX) observations confirm his comment's continuing relevance. Only the effective application of intelligence synchronization planning will render General Sullivan's comment forever obsolete.

Defining Synchronization

Intelligence synchronization contains both a purpose (to support decisionmaking) and a product (the delivered answer). **FM 34-2** provides this definition on page 2-4, *"Intelligence synchronization is the process that ensures the intelligence system provides answers to intelligence requirements in time to influence the decisions they support."* The G2 synchronizes the intelligence effort to provide tailored products that satisfy priority intelligence requirements (PIR)[4] by the commander's suspense.

The intelligence synchronization process describes the method by which the G2 satisfies individual intelligence requirements. While it requires actions in each step of the intelligence cycle, it does not replace the cycle. The G2 normally will employ a phased approach to intelligence synchronization (see Figure 1). For PIR 1, he may be executing step five of the intelligence cycle (disseminate). For PIR 3, the effort may be focusing on step one (plan and direct). The G2 should not expect to operate concurrently in the same step of the intelligence cycle for all PIR. The decisions that the decision points (DPs) support typically require products at different times.

Just as intelligence synchronization includes a purpose and a product, it excludes several ideas. As **FM 34-130, Intelligence Preparation of the Battlefield,** states, intelligence synchronization *"is more than simply ensuring that collection systems of various sorts are operating 24 hours a*

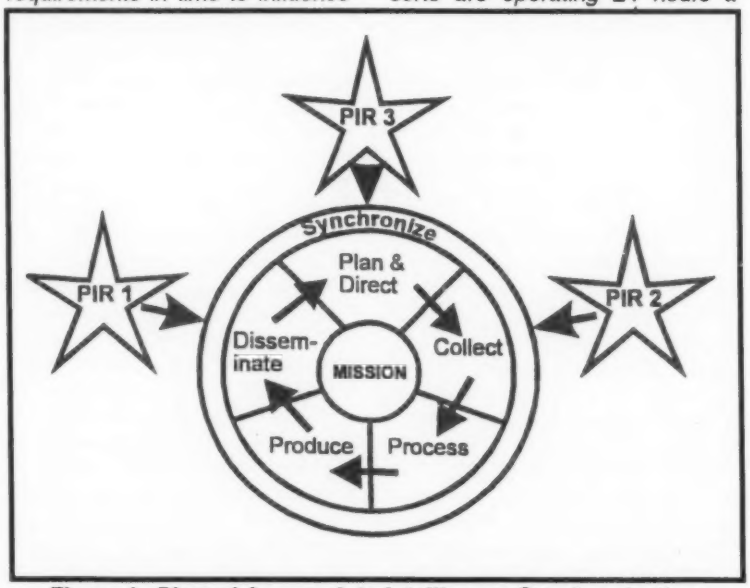

Figure 1. Phased Approach to Intelligence Synchronization.

day."[5] Intelligence synchronization is more than a trendy phrase. It orchestrates the action of each G2 element and supporting IEW assets to provide required products in the specified timeframe. It comprises the very core of the G2's role in the unit.

Developing the Plan

The intelligence synchronization plan describes how the G2 will satisfy a single intelligence requirement. Each PIR requires a separate intelligence synchronization plan. An information requirement supporting a decision may also require an intelligence synchronization plan.

The G2's intelligence synchronization plan must consider all five steps of the intelligence cycle. However, the G2's intelligence synchronization plan need not address tasks for those steps done outside the section. The following paragraphs address those steps applicable to the G2's intelligence synchronization planning process. Figure 2 is an example of an intelligence synchronization plan worksheet.

The commander must drive intelligence synchronization. Without his involvement in the process, the intelligence synchronization effort will probably fail. He accomplishes this vital task in two ways:

- ☐ First, he designates his DPs that require intelligence support. Once he has selected his DPs, the commander should place them in the operation order. He also should consider tracking DPs alongside PIR during the operation. This action will emphasize DPs to the staff and subordinate units, and may overcome the omission of DPs in the current operation order format. Too often the G2 alone emphasizes DPs, since he must recommend PIRs to support them.
- ☐ Second, the commander must give guidance regarding the intelligence he needs to make his decision. **FM 34-1** states,

"The commander establishes— ***What*** *he wants (intelligence required),* ***When*** *he wants it (LTIOV), and* ***How*** *he wants it (format, method of delivery)."*[6]

The commander explains the required intelligence by specifying the scope he wants in the report. This guidance may include these categories: geographic area, specific units, types of units, anticipated events, or other relevant factors. Additionally, he may limit the length of the report.

If possible, the commander also states the time at which he expects to make his decision. He should specify how old the intelligence can be before it no longer supports his decisionmaking needs. He also should say whether he wants interim updates (and, if so, when) or everything in one report.

Before stating how he wishes to receive the intelligence, the commander should consider both the product format and his location at the anticipated time of receipt. Does he require a verbal report, a written report, a graphic product, or some combination of the three? Does he want anyone else to receive the same report? His expected location at the time of decision will also influence the format of the report. If he expects to be away from a command post when making his decision, for example, he should require a verbal report.

These requirements of the commander might appear formidable, particularly under the time pressures that usually accompany tactical operations. Yet, intelligence synchronization is for the commander. It describes the process by which the G2 gives him the intelligence he needs, when he needs it, and in the form that he will find most useful. There is, therefore, no substitute for the commander's involvement. The commander may find it wise to establish a standing operating procedure (SOP) which formalizes his requirements. Likewise, the aggressive G2 should anticipate and recommend as many components of this guidance as possible.

The G2 completes the intelligence synchronization plan based on the commander's requirements. Essential planning tasks include—

- ☐ PIR and information requirements development.
- ☐ Indicator and specific information requirements (SIRs) development.

Intelligence Cycle Step/Line #	Who	What	Time Tasked	Time Done
1 - Plan/ Direct	Cdr	Designate DP requiring intelligence support		
1.a.	Cdr	Describe scope of intelligence required: UNIT(s) UNIT TYPE(s) AREA		
1.b.	Cdr	Designate type of report required: GRAPHIC ORAL WRITTEN		
1.c.	Cdr	Designate when intelligence is required: INITIAL UPDATE(s) FINAL		
1.d.	Cdr	State how old intelligence may be		
1.e.	G2	Develop latest time information of value (LTIOV)		
1.f.	Cdr	State expected location for first report		
1.g.	G2 Plans	Draft PIR for approval		
1.h.	G2 Ops	Prepare intelligence synchronization plan		
1.i.	Cdr	Approve PIR		
1.j.	ACE ASI	Identify resources (analyst(s), equipment) to prepare report(s)		
1.k.	ACE ASI	Develop indicators & SIRs		
1.l.	ACE ASI	Establish events alarms, if necessary		
1.m.	ACE CM	Prepare collection plan		

Figure 2. Intelligence Synchronization Plan Worksheet.

- ☐ Resource allocation within the analysis and control element (ACE).
- ☐ Collection plan, intelligence synchronization plan, and ISM preparation.
- ☐ Collection plan and synchronization plan approvals.

The intelligence synchronization plan details the steps necessary to deliver the required intelligence on time to support the DP. To quote **FM 34-1**, *"The plan includes the collection, processing, and dissemination required to support each intelligence requirement."*[7]

Ideally, the G2 will have already recommended the PIR during wargaming and has obtained the commander's approval. If not, the G2 must accomplish this task first. Rapid approval of PIR facilitates equally rapid indicator, SIR, and collection plan development.

The ACE chief begins his part of the intelligence synchronization process by identifying resources to accomplish the task. How many analysts must develop the products? If automation systems are available, how many must support answering this PIR?

The designated analyst then develops indicators and SIRs that he expects to answer the PIR. If the unit has automation systems, SIRs form the basis for event alarms to alert the analyst to key incoming reports. The ACE collection manager also uses those SIRs to develop the collection plan. He should attach a number to each SIR[8] when converting it to a specific order or request (SOR) for collection tasking. This step highlights the significance of incoming reports for processing.

The collection manager begins to develop the collection plan for the PIR by evaluating assets. Which assets are available? Based on the commander's suspenses, which of those assets could receive tasking, collect, and report soon enough for the ACE to conduct analysis and prepare the product in time? Based on this evaluation, the collection manager selects the best assets to conduct the mission.

While deciding which assets to task, the collection manager develops the ISM. The ISM serves as the tool by which staff officers confirm intelligence support to the commander's decisionmaking requirements and plans when to provide reports. The ISM, as depicted in Figure 3, should contain the following elements:

- ☐ Planning and execution timelines.
- ☐ Supported DP and its related PIR.
- ☐ List of relevant collection assets.

Each ISM should address only one PIR. It should depict relevant collection assets which the collection manager has tasked or requested to answer the PIR on the matrix. The ACE collection manager may show how the assets are tasked by listing the SIR numbers tasked or requested from each asset, or by showing how many SORs he has sent to the asset.

Typical problems observed in ISMs during BCTP WFXs center around the lack of linkage between the collection assets and the PIR portrayed. This lack manifests itself in several ways:

- ☐ The ISM shows a collection schedule of all available assets, instead of showing only those assets actually tasked to support the PIR.
- ☐ The ISM attempts to show synchronization for more than one PIR, and therefore actually shows it for none.
- ☐ The ISM does not state when to provide information to answer the PIR.

The G2 should obtain the commander's approval of the collec-

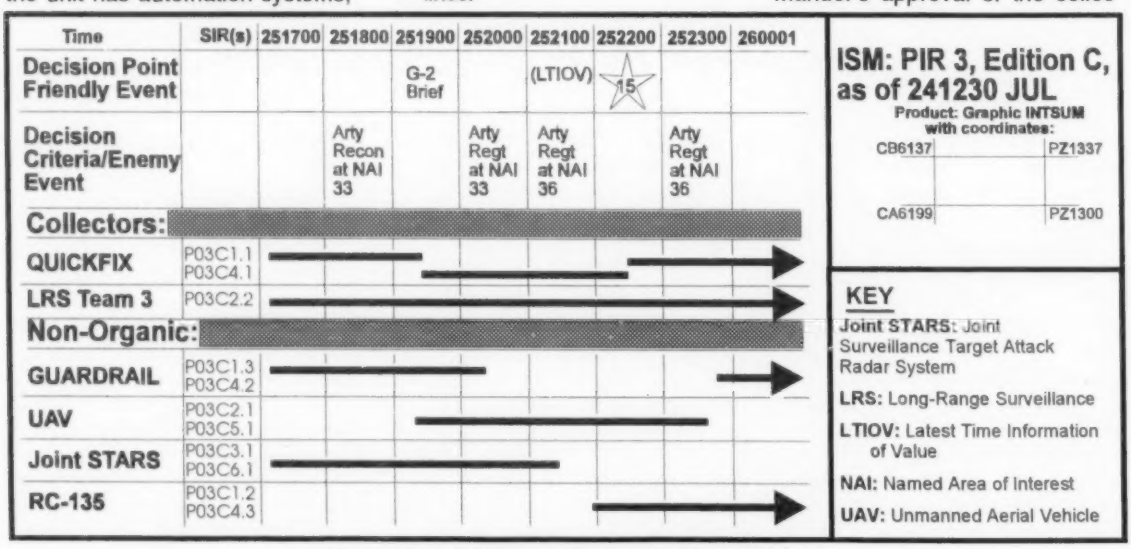

Figure 3. Intelligence Sychronization Matrix.

tion plan as soon as it is complete. While obtaining this approval, the collection manager should discuss any collection requirements that non-organic collection assets or organizations must satisfy. The commander thus becomes aware in a timely manner of critical gaps in the collection. He can then fight for essential support from non-organic assets that higher echelons have denied through routine request channels. The commander's approval then frees the ACE collection manager to task or request collection.

If the commander approves the collection plan, the G2 should also seek his approval of the intelligence synchronization plan. In this manner, the G2 backbriefs the commander on his plan to provide intelligence products in support of the commander's decisionmaking requirements. Intelligence synchronization planning now becomes *execution.*

Executing the Plan

Only the senior G2 officer on duty (G2 Operations or ACE chief) should supervise execution of the intelligence synchronization plan. The ACE collection manager is probably best suited to prepare the synchronization plan. However, the G2 should not require him to supervise the plan's execution. The collection manager is not the best person to supervise synchronization execution because the intelligence synchronization plan requires contributions from soldiers outside the collection management "shop." Consistent BCTP WFX observations have revealed that when the collection manager supervises its execution, the intelligence synchronization effort normally ends with the SOR.

After the collection manager submits the SOR, ACE analysts monitor incoming reports. Collection assets greatly facilitate report processing if they have attached SIR numbers to each outgoing report. If the ACE lacks automation systems with an event alarm capability, SIR numbers become the best means by which to identify reports relevant to the intelligence synchronization plan (and thus require expeditious handling).

The commander's guidance has described how and when to produce intelligence reports. The G2 must decide who will approve and release those reports. Can the senior person on duty send the report to the commanding general or must the G2 personally approve the report?

As the time for dissemination approaches, someone must confirm the commander's location and the means of dissemination. The plan's dissemination component must address who will give the report to the commanding general, particularly if he is not at the main command post. Nothing short of a personal delivery will suffice. If the commander desires multiple reports, then the production and dissemination steps become interwoven. Each report requires a verification of receipt.

Who else should receive a copy of the report given to the commanding general? Perhaps the unit SOP should require transmission of a warning order to units affected by the commander's decision. This order would review the status of the decision under consideration and provide the associated intelligence report.

Once the G2 provides information to the decisionmaker and satisfies the PIR, that particular intelligence synchronization plan has run its course. The collection manager now must update the collection plan, and delete those taskings associated with the satisfied PIR, in order to refocus affected assets on unsatisfied requirements. The G2 must learn if the commander approved any new DPs that will require intelligence synchronization support.

Conclusion

The process of intelligence synchronization begins with the commander's PIR to support decisionmaking. This synchronization effort matures into a plan that coordinates G2 and ACE activities within a stated timeframe. The plan concludes with one or more products to answer the supported PIR. The ISM should play a useful role in the process but never divert the G2's focus from production that will meet the commander's information needs.

Army doctrine has embraced the intelligence synchronization process. This process requires a plan. Without an effective intelligence synchronization plan, timely answers to PIR will elude decisionmakers. As we grapple with and solve the challenges of the intelligence synchronization plan, we will achieve new levels of performance in providing timely intelligence support to the commander.

The author gratefully acknowledges the helpful insights of Major Kenneth Watras and Chief Warrant Officer Three Joseph Okabayashi in developing this article.

Endnotes:

1. Brigadier General John F. Stewart, Jr., "Operation DESERT STORM, The Military Intelligence Story: A View from the G2, 3d U.S. Army," April 1991.

2. For insight into synchronization planning from the collector's viewpoint, see Captain Timothy J. Moynihan's "MI Battalion Synchronization Matrix: Tactical Tool for the Commander and Staff," ***Military Intelligence Professional Bulletin***, Vol.19, No. 1, January-March 1993, 38-41.

3. General Gordon R. Sullivan, "Delivering Decisive Victory: Improving Synchronization." ***Military Review***, Vol. LXXII, No. 9, September 1992, 8.

4. The G2 may employ intelligence synchronization to answer information requirements whenever those answers are required at particular times. I have emphasized PIR in this article by choice.

5. **FM 34-130, Intelligence Preparation of the Battlefield,** 8 July 1994, 1-11.

6. **FM 34-1, Intelligence and Electronic Warfare Operations**, 27 September 1994, 2-17.

7. Ibid, 2-20.

8. **FM 34-2, Collection Management and Intelligence Synchronization Planning**, 8 March 1994, 3-26.

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Brigade IEW in a Force Projection Army

by Captain Steven Guitron

Editor's Note: This article represents some of the initial work done on the revision of ***FM 34-80, Brigade and Battalion Intelligence and Electronic Warfare Operations.***

The divisional maneuver brigade of the past could rely upon its organic assets to provide the type and amount of intelligence needed by the commander to successfully plan and execute operations. Since today's brigade could become a task force headquarters in the new force projection army, the brigade and its battalions must be prepared to employ their own assets and assume control of attached intelligence and electronic warfare (IEW) assets from higher echelons. The S2, as the commander's senior intelligence officer, must be educated and skilled in the employment of the entire spectrum of assets, to include division, corps, and sister Services' sensors. This knowledge must include assets that the brigade and division do not currently possess or assets in final development that are provided for a crisis.

Range of Military Operations

Maneuver brigades no longer face a single, well-defined conventional threat. Now, these brigades must focus on conducting contingency operations as part of a force projection operation. Whether airborne, air assault, armor, light infantry, or mechanized infantry, they must be capable of conducting operations across the range of military operations. Brigades and their battalions must be able to conduct missions in peacetime, conflict, and war against threats ranging in size from well-armed regional powers in Southwest Asia to paramilitary groups in famine-stricken Africa.

At the brigade, peacetime is typically that time when the brigade is involved in normal training activities and noncombat operations. Examples include a rotation to the National Training Center and firefighting in a national forest.

Confrontation and hostilities short of war to secure tactical objectives characterize conflict operations. In this situation the brigade must prepare for operations and rapid deployment. The S2 must focus intelligence to the commander's priority intelligence requirements for predeployment, deployment, operations, and redeployment. By using this sequence the S2 provides the commander with the type of intelligence he needs to successfully execute the assigned mission. The S2 and the direct support (DS) military intelligence (MI) company must be fully prepared to receive new IEW and communications systems. (See Figure 1.) This equipment could be an AN/TSQ-90 TROJAN Special Purpose Integrated Remote Intelligence Terminal (SPIRIT) or a Joint Deployable Intelligence Support System (JDISS) terminal. Teams equipped with these systems should be intertwined within the existing brigade intelligence structure and used to provide the support intended by their parent organization. Should the brigade become an Army Force component of a joint task force (JTF) or a JTF headquarters itself, then its IEW capabilities will expand rapidly. The S2 section could receive assets and personnel from division, corps, sister Services, and national agencies such as the Defense Intelligence Agency and the National Security Agency.

The S2 must prepare the normal intelligence preparation of the battlefield (IPB), collection management, and all-source products for the impending deployment and conflict. He should make extensive use of higher echelons' (division, corps, theater, and national level) databases for the remaining intelligence requirements. Examples of conflict operations are peacekeeping, noncombatant evacuation operations, and support to insurgency.

War is the last environment. War involves the use of force in combat operations against an armed enemy. A general war is one in which major powers mobilize all national resources in a struggle for survival or dominance. At the brigade level, war requires battlefield intelligence which is accurate and timely. The brigade commander will use this intelligence to successfully fight and win the close battle and possibly the deep battle if the brigade acts as a force projection brigade. In support of operations, the S2 must effectively employ all intelligence capabilities within the area of operations. By using scouts, patrols, DS MI assets, and higher echelon intelligence support, the S2 can quickly provide a common view of the battlefield to each echelon within the brigade. This common view enables the combat commanders to make knowledgeable decisions based on the current tactical situation.

Operations during war place extreme stress on the intelligence structure and acquisition process. In light of this, the S2 must ensure that commander's critical intelligence requirements are met first and delay those that will not influence a decision until sufficient assets are available. This attention to detail in the collection management and synchronization process will ensure intelligence needed for decisions reaches the commander.

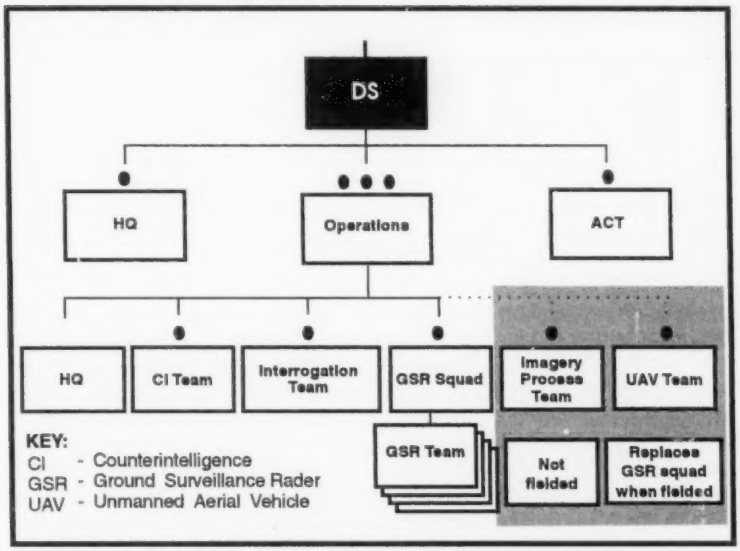


Figure 1. Direct Support MI Company, Heavy Division.

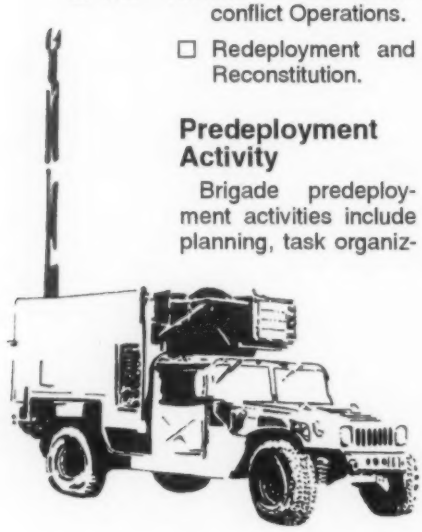
Force Projection Operations

Force projection operations typically include the ability to rapidly alert, mobilize, deploy, and operate anywhere in the world throughout the range of military operations. These operations extend from mobilization through deployment and operations to redeployment. Force projection usually begins with a rapid response to a crisis although it may involve a deliberate, slower build-up and deployment. During peacetime, the maneuver brigade includes deployment as part of its training. Brigades usually conduct force projection operations as part of the division or alone. IEW plays an important role in force projection operations by providing the timely and accurate intelligence needed by the brigade commander.

The brigade S2 and the analysis and control team (ACT) capitalize on the flexibility of the All-Source Analysis System (ASAS) remote workstation to support the brigade commander's force projection IEW requirements. The ACT officer in charge (OIC) configures the ACT components to provide seamless, uninterrupted intelligence support from predeployment through redeployment stages in any force projection operation. The ACT uses its ASAS workstations to update databases, develop intelligence products, disseminate intelligence, and control DS MI company operations throughout the operation. If equipped with ASAS, the subordinate battalion S2s use their workstations to provide the information needed at the brigade level. At the same time the battalion S2s can retrieve intelligence products from the brigade S2.

Army brigades and their subordinate battalions prepare to routinely execute six of the eight stages of force projection operations defined in **FM 100-5, Operations**. These six stages are—

- ☐ Predeployment Activity.
- ☐ Deployment.
- ☐ Entry Operations.
- ☐ Operations.
- ☐ War Termination and Post-conflict Operations.
- ☐ Redeployment and Reconstitution.



Predeployment Activity

Brigade predeployment activities include planning, task organizing, and echeloning the brigade and subordinate battalions. It also includes preparing personnel and equipment for deployment. When alerted, the brigade may have to modify existing operations plans. These modifications may include readjusting task organizations, sequencing forces, and refining sustainment requirements.

During predeployment operations, the brigade S2 and battalion S2s conduct necessary actions in order to retrieve key intelligence data needed for deployment. The brigade S2 supports peacetime contingency planning with IPB products and database management for likely contingency areas. The contingency plan identifies the IEW requirements supporting the plan. The plan also establishes collection strategies and plans that will activate upon alert notification. For smooth transition to hostilities, the brigade S2 must coordinate collection and communications plans before the crisis occurs. After activation of the contingency plan, the brigade S2 surges the intelligence effort to support the decisionmaking process. The S2 must refine intelligence products and prepare the initial entry IEW support.

During predeployment, the ACT exchanges information and databases with the division analysis and control element (ACE) and, if authorized, with the corps ACE. It also exchanges information with other intelligence organizations at higher and lower echelons. The ACT establishes connectivity with the division ACE so it can access other Services, joint, national, and Reserve Component intelligence activities that collect against or possess information on the contingency area.

Deployment

The proper arrival sequence of the brigade into an area of operations contributes to the stabilization of the situation and maintains a viable force protection capability. Success in force projection operations hinges on the capability of airlift and sealift assets to move forces to the area of operations quickly. The size and composition of forces requiring lift are based on mission, enemy, troops, terrain and weather, and time available (METT-T). The capabilities of host nation support and a forward presence of U.S. forces are also factors. Once the brigade arrives in theater, it moves to marshaling areas, staging areas, and then tactical assembly areas before executing operations.

If the brigade deploys as part of a division, then the division G2 would deploy a tactically tailored, initial entry team—the deployable intelligence support element (DISE). If the brigade deploys alone, a divisional DISE would not deploy and the brigade would rely upon its ACT augmented with a TROJAN SPIRIT. The mission of the DISE is to provide the division commander with continuous, timely intelligence during the initial stages of a force projection operation.

In force projection operations, the commander tactically tailors IEW support for each contingency. The commander should attempt to retain unit integrity and standard relationships when developing force packages. However, the deployment of the entire DS MI company may not be feasible. Tailoring of the force allows the brigade commander, with advice from the brigade S2 and DS MI company commander, to build a force that can fulfill current and future needs of the mission. Some considerations when building the IEW force include—

- ☐ **Assessing the requirements.** During mission analysis the brigade S2 must adequately determine the intelligence requirements of the upcoming operation based on METT-T. By performing this initial analysis of the mission, the brigade S2 and DS MI company commander can propose a tailored force based upon their knowledge of the available IEW assets, communications links, and processing

requirements. Other factors to consider are strategic lift resources and host nation support.

- ☐ **Deploying a DISE.** Will the configuration practiced during command post and field training exercises work for an actual deployment? Are the soldiers trained in their DISE support functions? Are communications practiced on a standard basis to ensure reliability? If so, then the division's DISE could deploy initially to support the operation then receive reinforcement as lift assets become available to the division.
- ☐ **Integrating IEW into the deployment flow early.** The commander must ensure that assets flow into the theater as they are required. The brigade S2 can support this objective by keeping the commander informed about which IEW assets best support his operation. The brigade commander can then judge when to allocate scarce airspace for IEW assets. If the S2 does not educate the brigade commander on what an MI soldier or IEW system can do for him in terms of tactical value, it will be extremely difficult to explain why it is important to put that TROJAN SPIRIT on an aircraft and leave behind a Bradley fighting vehicle.

Entry Operations

The brigade arrives in theater either as an entry force or a follow-on force. Entry forces can conduct either opposed or unopposed entry operations to secure the lodgment. Follow-on forces expand lodgments and build up combat power to sustain combat operations. During an opposed entry, the brigade conducts a forcible entry into an area that may contain hostile forces. In this situation, initial entry forces are primarily combat forces. During an unopposed entry, the brigade may serve as a deterrent, act as an advance party for a larger force, or participate in noncombat operations. The brigade may also conduct an unopposed entry under hostile conditions.

Force protection and situation development dominate collection activities in this stage. The division G2 and the brigade S2 attempt to identify all threats to arriving forces and assist the commander in developing force protection measures. During initial entry operations, echelons above corps organizations provide major intelligence support in a "push" mode to the division and brigade. This support includes departmental, joint, and scalable Army intelligence structures capable of deploying forward.

Collection and production capabilities are enhanced as IEW assets in the deployment area build up. As organic IEW assets flow into the theater, the brigade commander and S2 begin to rely on them for tactical intelligence although national and theater organizations remain a source of tactical intelligence.

Deploying intelligence assets of the brigade establish liaison with staffs and units already present in the area of operations. Liaison personnel and basic communications should be in place prior to the scheduled arrival of parent commands. The brigade S2 and the DS MI company commander should establish intelligence communications networks to support the brigade commander and subordinate battalion commanders.

Operations

Operations are the missions the brigade executes that contribute to overall mission accomplishment. The brigade may conduct both combat operations and other operations such as peacekeeping, humanitarian assistance, and support to drug enforcement. The brigade commander shifts his focus from IEW support for deployment to support required for sustained operations. In the operation stage, IEW operations reach a crossover point in intelligence support where organic tactical intelligence becomes the commander's primary source of support, reducing the reliance on top-driven national and theater intelligence. The brigade commander uses both tactical and operational intelligence to decisively engage and defeat the enemy.

During operations, the brigade S2 supports the development of friendly plans that identify and attack enemy centers of gravity while avoiding enemy strength. The DS MI company commander continually evolves his concept for employing his personnel and equipment to reflect changes in the operation. The brigade S2's collection management and synchronization plans continue to support the brigade commander's decisionmaking and planning.

Intelligence synchronization is a shared effort shared by the brigade S2 and DS MI company commander. This coordinated effort in the collection, production, and dissemination of intelligence helps ensure linkage of IEW operations to the commander's requirements and responses in time to influence decisions. At the brigade level, synchronization of intelligence evolves from the intelligence line of the brigade's Battlefield Operating System (BOS) Synchronization Matrix. By actively participating in the wargaming process, the brigade S2 remains fully aware of the upcoming intelligence requirements. The intelligence staff applies this knowledge to develop the brigade reconnaissance and surveillance (R&S) plan. The ACT, based on the S2's guidance and R&S plan, develops the brigade's IEW collection plan and intelligence synchronization matrix (ISM). The brigade S2 uses these tools to further develop and track the PIR, specific information requirements, and specific orders and requests sequence.

The synchronization of the dissemination effort must be the responsibility of the ACT OIC. The OIC must ensure that each ACT

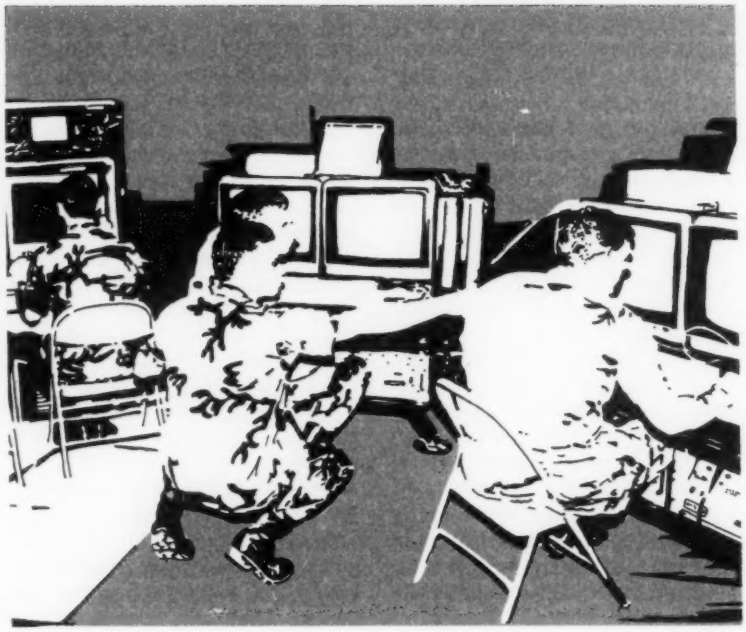
analyst has a copy of the BOS synchronization matrix, the ISM, and the collection plan. By providing these working tools to the analysts, they can rapidly review outstanding PIR, update ASAS alarms, and provide intelligence by the latest time the information is of value. The ACT OIC, in conjunction with the S2, also determines which analysts have message release authority. By allowing senior analysts message release authority, the ACT OIC empowers them with the authority to execute timely dissemination of tailored intelligence products to the combat commanders.

War Termination and Post-Conflict Operations

War termination and post-conflict operations are activities taken to restore conditions in the areas of operation that are favorable to U.S. national policy. During this period, the brigade focuses on force protection and preparing for redeployment. Post-conflict operations also include restoring order and reestablishing host nation infrastructure. Planning and versatility are two vital components of successful post-conflict operations. The brigade commander and his staff begin planning post-conflict operations before cessation of combat operations. This planning includes—

- ☐ Adjusting the rules of engagement.
- ☐ Evaluating and improving force protection measures.
- ☐ Transferring responsibilities to units assuming control of the brigade's area of operations.

Post-conflict activities include a variety of tasks from enemy prisoner of war control to civil affairs operations. The brigade also begins retraining its units on critical tasks and preparing for follow-on missions. The brigade S2 continues to support the commander's PIR. The nature of these requirements may shift from assessing threat forces to assessing political, economic, and other conditions that effect force protection and the desired end state.



Redeployment and Reconstitution

Redeployment is situation dependent and requires task organizing and echeloning similar to deployment. Some assets will depart early, such as advance parties, nonessential personnel, and equipment. During this phase, units continue to train on individual and mission essential tasks. The objective of reconstitution is to prepare for follow-on missions rapidly. These activities include rebuilding the unit's integrity and accounting for soldiers and equipment. The focus is on reconstitution of units to predeployment levels of readiness.

As the combat power and resources decrease in the area of operations, force protection becomes the focus of the brigade commander's PIR. This in turn drives the commander's selection of those MI assets that should remain deployed in support of the brigade. The ACT, a TROJAN SPIRIT team, and the DS MI company's counterintelligence and interrogation personnel, will normally be among the last to redeploy due to their ability to retrieve information and support force protection.

Conclusion

The Army has transitioned into an era in which smaller, more capable forces must quickly deploy and influence regional struggles within days. This new force projection army not only must support any mission with smaller combat ready units but also with smaller supporting forces. Supporting forces such as the DS MI company must be able to deploy on a moment's notice and conduct operations. Intelligence success or failure on today's battlefield depends upon how well the commander and S2 employs their IEW resources.

Captain Guitron is the primary author for the revision of FM 34-80. Prior to his assignment at Fort Huachuca, Arizona, he served in a variety of positions in the 1st Infantry Division at Fort Riley, Kansas, including assistant brigade S2, armor battalion assistant S2, and ground surveillance radar platoon leader. Readers can reach him at (520) 538-0979 or DSN 879-0979.

Maiden Voyage of a TEAMMATE

by First Lieutenant Mark D. Davey and Sergeant First Class David A. Brownson

On 19 July 1995, D Company, 311th Military Intelligence (MI) Battalion, 101st Airborne Division (Air Assault), conducted the first external sling-loading of an AN/TRQ-32A(V)2 TEAMMATE. Executed in close coordination with the U.S. Army Safety Center and the Natick Research, Development and Engineering Center, the soldiers of D Company proved that they could safely rig and sling-load to standard the AN/TRQ-32A(V)2 in both day and night lift operations.

D Company is the 311th MI Battalion's general support MI company and is equipped with three AN/TRQ-32A(V)2 systems. The TEAMMATE is an intercept and direction-finding system capable of stand-alone or netted operations. In addition to other TEAMMATEs, this intelligence and electronic warfare (IEW) system is interoperable with the AN/ALQ-151(V)2 QUICKFIX IIB, the AN/TSQ-138 TRAILBLAZER, and the AN/PRD-12. The TEAMMATE's communications equipment allows operators to send reports to the division's analysis and control element directly or through a supporting traffic analysis team over the Tactical Intelligence Gathering and Exploitation Relay system. These capabilities make the TEAMMATE a critical player in the division's overall intelligence collection plan.

The 101st Airborne Division routinely deploys its maneuver brigades to areas 150 kilometers forward of the division's base. To support these operations, the 311th MI Battalion often "slices" or attaches an AN/TRQ-32A(V)2 team to the direct support MI company with the brigade. They frequently exercise this support relationship during rotations to the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana. At JRTC, D Company soldiers have demonstrated the system value to the brigade warfighters in numerous rotations. The TEAMMATE teams routinely provide more intelligence and survive longer than the more vulnerable AN/PRD-12-equipped low-level voice intercept teams during battalion task force operations at JRTC.

A recent division exercise replicated a long-range air assault by flying 130 kilometers within Kentucky to Greenville training areas and back to Fort Campbell. In the past, this type of operation would have required the TEAMMATE teams to execute a long road-march to catch up to the brigade at the distant landing zone (LZ). During this exercise, D Company demonstrated that the TEAMMATE could be airlifted and accompany the air assault forces into the forward LZ.

The maiden voyage of the TEAMMATE lifted more than a AN/TRQ-32(V)2; it elevated IEW support to air assault operations to a new level. D Company and MI units with similar missions can now spend less time deploying in ground convoys and more time providing timely intelligence during the earliest stages of an entry operation.

Photo provided by author

Sergeant Jose Placer and Specialist Gary Ashburn connect the external sling to a CH-47D.

First Lieutenant Davey is currently the Executive Officer for D Company, 311th MI Battalion, DSN 635-3505.

Sergeant First Class Brownson is currently the Platoon Sergeant for the Signals Intelligence Platoon, D Company, 311th MI Battalion.

AN/TRQ-32A(V)2 SLING-LOAD OPERATIONS

Resources:
25k Sling Set.

Link Count:
Front - 62
Rear - 22

Safety:
Use reach pendants and spreader bars with the breakaways for safety.

Lift Points:
Front: Center of hood (2).
Rear: Remove steps, move towing shackles to ends of rear bumper. (No additional hardware necessary.)

Breakaways (6):
a. Tie front legs together above windshield.
b. Tie both front legs to the ring located on top of the air conditioning converter at the front of the shelter, pulling the legs tight to keep from being caught under the condenser or converter.
c. Tie both front legs together just below the apex.
d. Tie each rear leg to the spreader bar where the leg passes through the bar, keeping legs tight to avoid dragging.
e. Tie both legs together at center of spreader bar.
f. Tie both rear legs together just below the apex.

Note - The AN/PSN-11 PLUGGER antenna may be inverted on the mounting bracket to keep it away from the sling legs. This will not affect operations of the PLUGGER. An alternate approved rigging requires the addition of an extra length of chain to each sling leg.

Building a Division DISE

by Lieutenant Colonel
Brian A. Keller

The 10th Mountain Division (Light Infantry) learned many important lessons during our back-to-back rotations at the Joint Readiness Training Center in Fort Polk, Louisiana, from 1 October to 22 November 1995. In particular, our 2d "Commando" Brigade's participation in the Army's Advanced Warfighting Experiment (AWE) WARRIOR FOCUS 96-02 this November allowed the division's leadership and military intelligence (MI) personnel to visualize vital principles of force projection intelligence and electronic warfare (IEW) operations.

One IEW principle, split-based operations, sparked great interest with the division commander. He wanted to know what the division's deployable intelligence support element (DISE) would look like if we deployed a brigade combat team and a division assault command post? Follow-on division forces including the division's analysis and control element (ACE) might deploy later based upon—

- ☐ Mission, enemy, troops, terrain and weather, and time available.
- ☐ Changing political or military situation.

They may also remain in garrison and not deploy. The following information summarizes the division intelligence community's response to the division commander's question.

Definition

Three sources helped answer the division commander's question. The first was **FM 34-25-3, All-Source Analysis System and the Analysis and Control Element,** dated 3 October 1995. Our second source was the U.S. Army Intelligence Center and Fort Huachuca's draft DISE Functional Concept dated 19 May 1995. Finally, my observations of an actual DISE—for the requirements of AWE in this case staffed and equipped by both 10th Mountain Division and 513th MI Brigade soldiers and leaders—provided the last source for our response.

By doctrinal definition, the DISE is a small, forward intelligence support element of a split-based operation. As such, it is not a specific organization but rather an ad hoc, tailored team uniquely configured to support the initial entry commander. Once deployed, the DISE performs two major functions. First, it provides the initial entry commander a link from his forward command post back to an intelligence support base located outside the area of operations. This link provides the initial entry force J2/G2/S2 access to multisource Army and joint intelligence collection assets, processing systems, and databases. From these sources, the DISE can "pull" specified intelligence products. Second, the DISE provides the deployed commander timely, relevant, accurate, and continuous intelligence support that the commander needs to develop his intent, refine his concept of operations, and execute his mission.

During mission analysis, the G2 provides the commander with a recommendation on the composition and capability of the initial entry IEW force. The IEW force

should be a task-organized, tactically tailored element that considers the mission, the commander's intelligence requirements and intent, the threat, and the availability of lift assets. In most scenarios, the division DISE would look like the following.

Equipment

We envision two or three high mobility multipurpose wheeled vehicles (HMMWVs) configured with communications shelters and two Standard Integrated Command Posts (SICPs). Of these, at least one vehicle would be a TROJAN Special Purpose Integrated Remote Intelligence Terminal (SPIRIT) and another the Mobile Integrated Tactical Terminal (MITT).

The TROJAN SPIRIT brings with it an All-Source Analysis System (ASAS) compatible workstation and a robust communications package. It provides dedicated satellite communications to the Defense Data Network and to other intelligence organizations via the TROJAN wide area network. The system also possesses the necessary hardware and software components that allow the G2 to interact with tactical and theater systems such as the Mobile Subscriber Equipment (MSE) and the Joint Worldwide Intelligence Communications System. The MITT provides access to satellite broadcast downlinks of secondary imagery dissemination system products and correlated signals intelligence (SIGINT) reports.

Two SICP tents extending from the rear of the vehicles provide a secure, covered work area. We would position a third HMMWV, most likely the G2's vehicle, near remote MSE Mobile Secure Radiotelephone Terminals (MSRT) and single channel radio capabilities into the SICPs. Within the work area would also be two ASAS-Extended remote workstations (RWSs) linked to the TROJAN SPIRIT. These workstations provided the DISE access to databases and analysts outside the area of operations to support planning, situational awareness and development, targeting, and force protection. Finally, Joint Deployable Intelligence Support System software contained on TROJAN SPIRIT workstations and some ASAS RWSs allows analysts to receive, transmit, and manage SIGINT, topographic, and national databases to accomplish strategic-tactical interoperability.

Personnel

Personnel from the division's ACE would form the DISE. Normally, the chief of the ACE's technical control and processing section leads the DISE. Other members include—

- ☐ Six TROJAN SPIRIT and MITT operators.
- ☐ One warrant officer and four enlisted all-source intelligence analysts.
- ☐ One warrant officer and two enlisted SIGINT analysts.
- ☐ One warrant officer with Tactical Exploitation of National Capability Program (TENCAP) experience.

In all, sixteen personnel from the 10th Mountain Division's ACE deploy as the DISE. These figures do not include MI personnel operating the G2 section in the division assault command post, the direct support (DS) MI company, or the brigade combat team S2.

Operation

Once deployed, the DISE provides an important link to the DS MI company's analysis and control team (ACT) at the brigade combat team command post. When equipped with an ASAS RWS, the four intelligence analysts working in the ACT can pass combat information, graphic intelligence summaries, and spot reports from the brigade to the DISE over the division's MSE network. In a similar fashion, the DISE can provide correlated, multidiscipline products—tailored to meet specific intelligence requirements and needs—to the brigade commander and his staff via the ACT. The synergism of the ACT-DISE link now helps create a common battlefield picture, a picture fused from brigade analysis and reporting with analysis leveraged from intelligence support bases outside the deployed area of operations. Taken together, the division DISE and the brigade ACT form a very powerful analysis and dissemination combination.

Conclusion

The DISE provides the initial entry force commander an important link to the powerful information collection and intelligence production capabilities of the entire intelligence community. Properly configured, staffed, and trained, the DISE offers the deployed force an ability to quickly leverage and focus the people and system of the Intelligence Battlefield Operating System on the commander's priorities. In short, the DISE helps provide our commander the intelligence support he needs to protect his combat strength and focus power at the right time and place to win on any battlefield.

Lieutenant Colonel Keller is currently the G2, 10th Mountain Division (Light Infantry), at Fort Drum, New York. He is a graduate of the School of Advanced Military Studies at Fort Leavenworth, Kansas. Readers can reach him at (315) 772-9526, DSN 341-9526, or E-mail kellerb@drum-emh1.army.mil.

1996 G2/Commanders Conference

The **1996 G2/Commanders Conference** will be 22-25 April at Fort Huachuca, Arizona. This year's theme is "Training the MI Force." Topics presented will capitalize on recent events and initiatives within the Intelligence Center and from the field. The agenda will include training for traditional and nontraditional operations, information dominance, analysis and control element training, systems updates, and a range of issues important to our corporate missions. The action officers for the conference are Major Brady at (520) 538-0706 or DSN 879-0706 and Lieutenant Colonel Phelps at DSN 879-1178. You can also reach them via E-mail at bradyw%... or phelpsw %hua1@huachuca-emh11.army.mil.

Lessons From Operation RESTORE DEMOCRACY

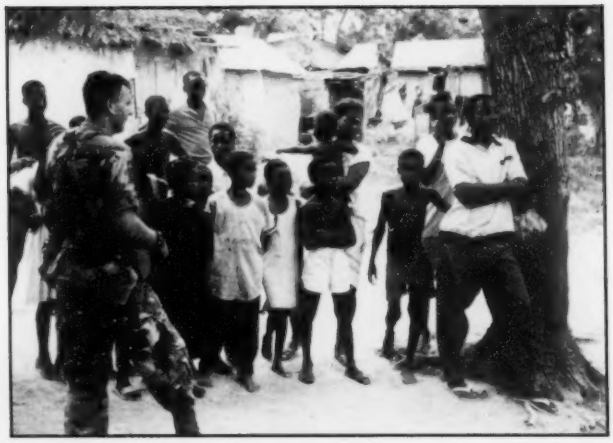


Photo provided by author

Editor's Note: The term "Operations Other Than War" used throughout this article is no longer doctrinally accurate. Precise terminology while discussing peace operations, humanitarian assistance, and operations in aid of civil authorities should replace "OOTW." This guidance was released in MSG, Joint Staff, DJS, 311514Z AUG 95.

by Captain Michael W. Schellhammer, USAR

In the past several years, the Army intelligence community has grappled with how to define the parameters of operations other than war (OOTW) and how intelligence should support OOTW. Threat trends of the last decade indicate that OOTW will become more frequent in the near future. Peacetime contingency operations in Grenada, Panama, and Somalia were milestones in the development of effective intelligence support. Recent operations in Haiti also provide valuable lessons on how to manage intelligence in the OOTW environment. This article offers some ideas from the "bottom-up" on managing tactical intelligence during an unconventional conflict.

Background

I participated in Operation RESTORE DEMOCRACY as the S2 for the 450th Civil Affairs Battalion (Airborne), U.S. Army Reserve (USAR), from September to December 1994. Before activation of the battalion, the S2 personnel built a database containing civil-military information on Haiti. After activation, we used the database information to prepare our initial area assessment and preliminary intelligence preparation of the battlefield (IPB) products. As the 82d Airborne Division's Capstone program civil affairs battalion, we conducted all predeployment planning with the division and launched with it on the aborted airborne assault of 17 September. The 450th Civil Affairs Battalion, attached to Task Force (TF) Mountain under Joint Task Force (JTF)-180, later deployed to Haiti on 20 September.

IPB Focus and Products

The IPB and analysis techniques taught at the U.S. Army Intelligence Center work—use them. An exhaustive IPB is an absolutely essential foundation for effective intelligence support. TF Mountain's area of operations focused on the capital, Port-au-Prince. The TF had a 360-degree focus, with no traditional battlefield geometry. Although we conducted preliminary IPB before deployment, the city was still unfamiliar. In addition, roughly one million civilians and three potentially hostile political groups occupied the city. Detailed IPB was the key to understanding this confusing battlefield. We used IPB products defined in **FM 34-3, Intelligence Analysis**, and civil affairs intelligence products from **FM 41-10, Civil Affairs Operations**(see Figure 1). When combined, they provided a solid picture of the key terrain and possible targets in the TF area.

The TF Mountain G2 provided sufficient information on the Haitian Army, the Forces Armée d'Haiti, (FAdH). We looked to outside agencies for detailed civil-military infor-

IPB Products

- ☐ Incident Overlay
- ☐ Targeted/Named Areas of Interest
- ☐ Trap Overlay
- ☐ Population Status
- ☐ Key Terrain
- ☐ Resource Overlay
- ☐ Situation Overlay
- ☐ Lines of Communication Overlay
- ☐ Key Facilities and Targets Overlay
- ☐ Monuments and Cultural Overlay

Figure 1. Useful IPB Products.

mation. The U.S. Agency for International Development (USAID) had information on the Haitian government, economics, hydrology, and population statistics. The Defense Attache Office (DAO) in the U.S. Embassy provided population and threat information for the Port-au-Prince area.

The large number of civilians in the area, combined with the volatile political situation, made civil disturbance a primary concern. Large demonstrations not only posed a threat to U.S. soldiers and local stability, but also presented large targets for attack by opposition parties. Protecting the friendly population was part of our mission, and we included the civilians as an element of "thinking green" during IPB.

The likelihood of civil disturbance was one of our priority intelligence requirements. Civilian crowds could gather and disperse quickly with little warning. The crowds were difficult to predict, therefore named areas of interest (NAIs) focused on known population-gathering areas and march routes. Common NAIs were churches, key road intersections, and government buildings where demonstrations were likely. Looting became more frequent as the operation evolved, so we later added NAIs at food storage facilities and in the business district.

When preparing IPB overlays, remember that OOTW require a greater level of incident-tracking detail than conventional operations. Several incidents, including violence, enemy human intelligence (HUMINT) collection, population intimidation, and criminal activity occurred within a two-block radius of Port-au-Prince within a few weeks. Low-level collection on individual murders, beatings, and looting is the core of the incident overlay, so the S2s must be ready to manage hundreds of individual incident reports.

Military operations in urban terrain also require a more detailed focus than conventional operations. Key terrain ranged from single buildings or city street intersections to areas of several square kilometers. We used 1:12,500 maps and map enlargements to analyze key terrain. The 1:50,000 scale maps were almost useless in the city; they *were* useful in the division area of interest outside Port-au-Prince. Friendly strike operations often targeted small buildings or city blocks. Terrain focus rapidly shifted between individual buildings and the entire city. Even with 1:12,500 maps, analysis of such small areas was difficult. We needed a tool to rapidly zoom in on specific areas, and zoom out again.

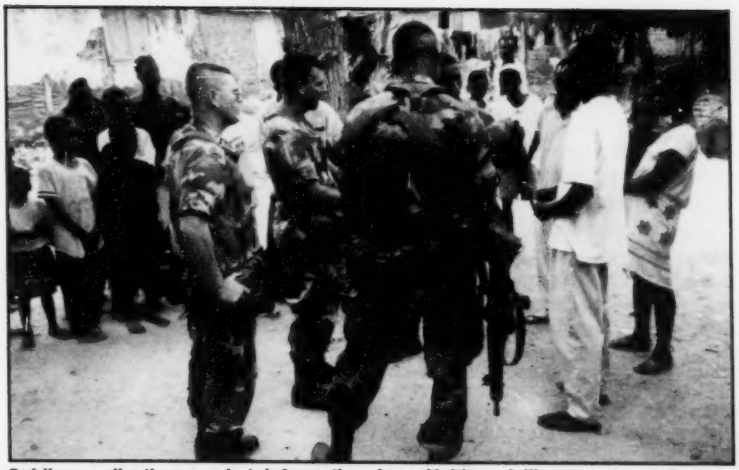


Photo provided by author

Soldiers collecting combat information from Haitian civilians north of Port-au-Prince.

Tactical Reporting

Size, activity, location, unit, time, and enemy (SALUTE) reports from U.S. patrols were invaluable. Full SALUTE reports are critical to the success of tactical collection. In OOTW, every soldier is a collector. Soldiers from the 450th Civil Affairs Battalion conducted daily patrols through Port-au-Prince and reported a wealth of information in SALUTE reports. On average patrols, Haitian citizens reported items such as enemy weapons caches, headquarters locations, or intimidation activity. One civil affairs team found hundreds of Haitian government election and military documents at "Baby Doc" Duvalier's palace in Petionville. Early in the deployment, soldiers often reported information in free-text spot reports that did not fully explain the activity or incident. The SALUTE format focused the soldiers' reporting to accurately reflect almost any type of observed activity. Once soldiers began using the correct format, we received complete reports of important enemy activities that received attention throughout the division.

All-Source Operations

OOTW requires all-source intelligence. Each intelligence discipline has valuable contributions to make to the overall picture. In Haiti, HUMINT dominated the collection. HUMINT consistently provided reliable information on enemy and civilian attitudes and intentions. Counterintelligence (CI) teams targeted the opposition parties and subversive FAdH members. In addition to force protection, CI teams also conducted positive collection missions. Maneuver brigade commanders used their direct support CI teams in a wide variety of missions. CI teams investigated routine criminal activity and performed low-level psychological operations and civil affairs liaison missions.

Targetable imagery intelligence was in high demand down to the company level. Oblique photos of suspected threat locations or targets were invaluable to planning patrols or strike operations. The TF Mountain G2 had a large library containing hardcopy imagery of key facilities and terrain in Port-au-Prince; we distributed them on request. For other targets not located

near key areas, the G2 requested specific imagery collection missions from theater assets. Remote sensor imagery was very useful for updating maps.

No intelligence discipline was completely reliable on its own. Correlated information from all sources provided an accurate battlefield picture. For example, HUMINT sources often indicated enemy weapons caches at various residences throughout the city. Since opposition groups often communicated over nonsecure systems, signals intelligence was also a valuable collection tool. However, only consistent all-source collection at the possible threat location could positively confirm or deny enemy activity.

Photo provided by author

Dejected Haitian police watch soldiers from the 2-22d Infantry and 450th Civil Affairs Battalion collect information from civilians in the town of Savenette.

Threat Analysis

Throughout the operation, threat analysis was a difficult process. The armed opposition parties presented our greatest threat. At least three well-armed political factions opposed President Jean-Bertrand Aristide and the U.S. intervention. Despite their expressed overt cooperation, they covertly planned attacks on U.S. forces and pro-Aristide civilians. Although many of their leaders were FAdH members, these hostile groups essentially had no doctrine or established patterns to integrate into analysis. We had no historical example for developing a threat model. All of the threat's previous activity involved intimidation against the unarmed populace of Port-au-Prince.

Threat group operations were exceptionally decentralized. The activities or plans of one cell in one area of Port-au-Prince usually had no relation to the activities of any other cell. Cells may have followed their recognized national leadership, some did not. The absence of threat tactics, doctrine, and training made predictive analysis extremely difficult. Several planned attacks on U.S. forces never took place for unknown reasons. Their unpredictability and decentralization contributed to difficult threat integration. Over time, limited trends became apparent. For example, their decentralization allowed us to place less value on threat leaders' covert plans for attack. When an information source reported a planned attack, we realized that the probability of local cells carrying out the attack was low. Friendly demonstrations also developed trends. Friendly political leaders were sometimes as unsuccessful as the opposition with controlling their followers. Over time, we were mindful that spontaneous gatherings or planned peaceful demonstrations had the potential to turn violent with no warning.

Common Picture

Achieving and maintaining common IPB or threat situation products was also difficult. Below the TF Mountain G2 level, no common picture of the battlefield or the threat existed. I compared IPB and threat information with several S2s in the JTF-180, and each of our battlefield pictures varied greatly. There appeared to be a gap between information available at the joint level and that at the battalion level. At the battalion level, we received the bottom-up feed from patrols, and pulled information from the JTF. We acquired most of our tactical threat information from civil-affairs team patrol reports, the TF Mountain G2, and the 519th Military Intelligence Battalion (CI). We received little tactical information from the JTF. An information "push" from the JTF could have ensured that all staffs had the same picture of key terrain, possible targets, and threat activities.

Automation

Combat information and intelligence must move faster than the threat. The threat in Port-au-Prince was more familiar with the terrain than were friendly forces. There was also an active threat HUMINT collection net throughout the city. To overcome such obstacles in the future, friendly forces must have the capability to rapidly report, analyze, and disseminate intelligence before the threat can move. Hand-carrying hardcopy reports or imagery through multiple staff levels is too slow for OOTW. We need local area network dissemination and reporting capability. Analysis and dissemination must take minutes, not days.

Conclusion

There is no great mystery or secret code to intelligence in OOTW, but there is a different focus than in conventional operations. The S2 should selectively apply standard intelligence tools and skills to read the battlefield. Follow the guidance in **FM 34-3** and **FM 34-7, Intelligence and Electronic Warfare Support to Low-Intensity Conflict Operations**. Other lessons learned include—

- ☐ You must tailor IPB products to your particular area of operations and mission.

- ☐ You should seek information creatively. Other agencies, such as the DAO and USAID, can provide host nation information not available from standard channels.
- ☐ You must have correlated all-source information for an accurate threat picture.
- ☐ HUMINT, including combat information from soldiers, dominates the OOTW battlefield, but do not discount the value of other intelligence disciplines.
- ☐ The demand for imagery increases in OOTW, and will increase in future operations. You should prepare to disseminate imagery to the company level.
- ☐ Correct SALUTE reporting is essential—train on it.
- ☐ You should prepare to manage nontraditional information, such as criminal activity, and civil disturbances, to develop accurate incident overlays.
- ☐ A push-down system of intelligence reporting is essential to ensure a common battlefield picture.
- ☐ We must employ automated systems to rapidly collect information, assist with analysis, and report horizontally and vertically. Automation will enable us to move information faster than the threat can move his forces.

The U.S. intervention in Haiti achieved rapid success through maneuver combined with effective intelligence support. By employing these lessons learned, we can win again and save lives.

Captain Schellhammer is currently the S2, 450th Civil Affairs Battalion (Airborne), USAR, in Riverdale, Maryland. He was an Active Component officer for eight years in infantry and intelligence. As a civilian intelligence research analyst, he is supporting the Army's Project Management Office, Intelligence Fusion, in McLean, Virginia. Readers can reach him at (703) 893-9095, through the PM Intelligence Fusion at DSN 235-8140, or the author's E-mail mschellham@asaspmo.belvoir.army.mil.

Tailoring the MI Basic Load

by Captain Jeremy M. Dick

The U.S. Forces Haiti (USFH) Joint Intelligence Center (JIC) supports the commander by providing indications and warnings, monitoring and reporting threat capabilities and intentions, and producing intelligence. There is a variety of equipment both table of distribution and allowances (TDA) and non-TDA that the JIC uses to accomplish these missions. This article focuses on some of the non-TDA equipment that can significantly enhance collection, production, and dissemination of intelligence in operational environments similar to those in Haiti.

In a war, intelligence operations follow basic doctrine. The equipment used is, for the most part, standard. For operations in areas such as Haiti and Somalia, there is some basic off-the-shelf equipment that can aid in collecting and processing intelligence. Because 80 percent of usable intelligence in these environments is derived from open sources, most of the equipment is geared toward that end.

Television and Radio

In Haiti, people are key terrain. The JIC uses a television set for watching Cable News Network (CNN), local Haitian news, and special events. Because Haitians tend to be opinionated, television is extremely useful for getting the general public's interest, attitudes and feelings about our military presence and operations in Haiti. Television also lets Haitians give their perceptions of the status of their economic and social situation. By using a video cassette recorder and player, the JIC can record items such as news events and speeches for playback, translation, and dissemination.

Monitoring daily radio broadcasts is also important because many news items are not covered daily on television stations. Also, the radio is the medium of choice in Haiti for influencing public opinion. It is "near-real time" and enables the JIC to get another viewpoint.

The JIC uses an off-the-shelf Bearcat scanner to monitor U.S. and United Nations (U.N.) and police communications, and to cross-queue patrols. This gives the J2 access to a wider range of information sources. It can also help to confirm or deny initial reports.

A computer video-capture card allows the JIC to print quality pictures from videotape for planning purposes. For example, the JIC can convert a television clip to a picture for use in a biographic report.

Cameras

A camera's utility cannot be overstated. The majority of imagery in Haiti is pre-invasion (such as significant military facilities like airfields, command and control facilities, and power stations). Although the imagery is useful, it is classified secret and not authorized for foreign dissemination in many cases because of the source. It therefore cannot be distributed to our U.N. counterparts.

Several handheld cameras are essential. Hand receipting a camera to force protection (counterintelligence and human intelligence) teams, Special Operations Task Force teams, or helicopter passengers, can provide much needed information.

Soldiers not experienced in using 35-mm cameras should use fully automatic cameras. This helps the novice photographer take fewer over or under exposed pictures from poor lighting.

One of the most important cameras the J2 should have is a 35-mm digital camera with a telephoto lens of at least 70 mm x 200 mm. A digital camera is preferable over a regular camera because the operator can quickly download its electronic images to a computer for immediate use.

For standard photography, a photolab on site to develop film ensures quick turnaround times. Where no military photographic support exists, the use of color film will simplify getting quick prints when necessary. It is easier and quicker to get color film developed on the Haitian economy than black-and-white. Also, most scanners can easily convert to gray scale with little loss in resolution.

Video cameras are extremely useful for terrain walk familiarization when it is not feasible to visit an area. For example, the Bangladeshi contingent used a video camera for planning during a U.N. operation. Additionally, in many cases, the presence of a video camera deters crowds from conducting hostile acts. Haitian crowds have refrained from violence for fear of being identified and possible retaliation.

Software and Modems

Microsoft Access is a relational database software program that enables the JIC to keep track of intelligence reports. The software is extremely useful for several reasons. It is off-the-shelf technology; is economical, user-friendly, almost universally known; and can be placed on a local area network system for everyone's use.

Force protection teams use software extensively. Operators and analysts can make keyword searches on all spot reports back to September 1991 (the earliest reports generated from the U.S. intervention.) They can instantly retrieve personality profiles and biographies.

Located in the northern Caribbean Sea, Haiti occupies the western third of the island of Hispaniola; the Dominican Republic is to the east. Comparatively as large as Maryland, Haiti has a population of 6.5 million people, with an unemployment rate of more than 50%. Agriculture, which occupies 66% of the labor force, is mainly small-scale subsistence farming. This is partly due to the mostly rough and mountainous terrain. Extensive deforestation, erosion and an inadequate supply of potable water are issues of major concern. Haiti is also subject to occasional flooding, and periodic droughts. With a total of 40 kilometers of railroad, less than 25% of all roads paved, and less than 100 kilometers of inland navigable waterways, transportation is very limited. Acting as an important transshipment point for cocaine and marijuana, smugglers find Haiti to be a strategically placed country. Haiti continues to depend heavily on foreign aid.

A future JIC project is to catalog spot reports into various categories, such as assassinations, murders, demonstrations, locations, etc. The commander may ask "which incidents have occurred at location x, y, z within the last two years" or "give me everything you have on political assassinations."

A computer modem with access to the Internet is a necessity. We can download satellite weather images, stateside forecasts, and storm warnings on a daily basis to provide current forecasts. Updates from the National Hurricane Center and the National Weather Service are directly available on the Internet for instantaneous updates.

Information on Haiti's history, geography, culture, political leaders, holidays, etc., is also readily available. The Federal Broadcast Information Service, Reuters, Haitian local papers, CNN, even access to the Library of Congress and Defense Information Technological Service (for example, War College Papers) are all accessible through the Internet.

Scanners and Printers

Using a high quality scanner, the JIC scanned photographs taken by handheld cameras from helicopters into a Joint Deployable Intelligence Support System (JDISS). Using JDISS, the JIC was able to manipulate shading, add annotations, and transmit the images to subordinate units. In some cases, we used a scanner and a high-resolution printer to produce quality images for planning purposes. This enables multiple reproduction with minimal loss of clarity.

Laser printers (resolutions of 600 x 600 dots per inch preferred) proved invaluable for producing quality, legible images for planning purposes. A color laser printer for printing JDISS images would also be useful.

Conclusion

To significantly enhance a JIC's capabilities, bring a television set, videocassette recorders, radio, Bearcat scanner, cameras (digital and single lens reflex, photolab equipment, color film), scanner, video camera, computer video capture card, laser printers, relational database software program, and access to the Internet. These items are available as off-the-shelf technology and require minimal training to operate. By being innovative, the JIC in Haiti is able to increase its capabilities and continues to be "Always Out Front."

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Electronic Warfare British Style

By Major Robert L. McPeek

We have all seen the winds of change blowing through the world. The Berlin Wall has come down, new crisis areas have emerged, and military forces not only need to be proficient in the art of war for regional conflicts but also train for operations other than war. The structure and mission of the North Atlantic Treaty Organization (NATO) are no less affected by this changing world and its corresponding impact on the nature of military operations.

A major outcome of these changes has been the downsizing of NATO's military forces. Downsizing coupled with political pressure may lead NATO to create more integrated multinational corps and below formations. The Allied Corps Europe (ACE) Rapid Reaction Corps (ARRC) and the Multinational Division Central (Airmobile) are two examples of the integrated multinational NATO formations currently in existence. As future military operations become more of an international effort, it becomes imperative that U.S. military personnel continue to learn more about how our NATO allies operate in all aspects of combat arms, combat support, and combat service support.

A Need to Know

Within the U.S. intelligence community, how many military intelligence (MI) professionals really know how our NATO allies plan and direct, collect, process, produce, and disseminate intelligence? Would it not benefit the overall operation if we knew the answers to those questions before we deployed on a real-world NATO operation? Imagine how much better intelligence liaison would be if the liaison officer came to a NATO headquarters with a good working knowledge of not only how our MI assets work but also how the supported allied headquarters intelligence assets work. Having this knowledge would allow us to assist in fully integrating all NATO intelligence and electronic warfare (IEW) assets into the maneuver commander's plan.

This article provides a brief synopsis of the organization and capabilities of the British Army's electronic warfare (EW) unit, the 14th Signal Regiment (EW). As the only organization of its kind in the British Army, the 14th Signal Regiment has kept quite busy supporting all levels of command from tactical to strategic. The regiment has supported numerous NATO, United Nations, and British national operations including those in Kuwait and Bosnia-Herzegovina.

In July 1993, I became the S3 operations officer of the 14th Signal Regiment, the British Army's only EW unit. Serving as the S3 of the British Army's only EW regiment for two years was one of my most rewarding and challenging assignments. This unique assignment gave me the opportunity to gain first-hand knowledge of some of the non-U.S. intelligence assets currently available to support a NATO operation. Hopefully this article will generate interest in learning more about other NATO EW units, because the time to learn about one another is now, not when we are called upon to support one another.

The Regiment

The 14th Signal Regiment (in U.S. terms a battalion) comprises four squadrons (equivalent to U.S. companies) with an established strength of 800 personnel. (See Figure 1.) As the regiment's name indicates, this is a British Royal Corps of Signals unit. In the British Army, the Royal Corps of Signals has the proponency for EW. Virtually all EW officers and unit commanders in the regiment are Royal Corps of Signals officers. The British Army's Intelligence Corps representation within the regiment is mainly in the enlisted ranks as EW analysts and linguists.

The regiment traces its origins to 1959 when it provided worldwide communications support for the British Army. The regiment reformed as the 14th Signal Regiment (EW) in 1977. Garrisoned in Celle, Federal Republic of Germany, the regiment's mission for the next 15 years was to provide tactical EW support to the 1st British Corps, British Army of the

Rhine. With the formation of the ARRC in 1992, the regiment's mission changed to tactical EW support to that NATO headquarters. Restructuring in the British Army led to the 1993 relocation of the regiment's Headquarters, 245th, and 226th Signal Squadrons from Celle to Osnabruck, Federal Republic of Germany. Its 237th Signal Squadron moved to the United Kingdom (U.K.) in April 1993. In December 1995, the remainder of the 14th Signal Regiment moved back to the U.K. and is now located at Royal Air Force Brawdy, a former U.S. Navy and British Royal Air Force base on the west coast of Wales.

The regiment is similar in some respects to a U.S. Army divisional MI battalion. The similarities however cease when the regiment deploys on an exercise or real-world operation. The regiment does not deploy as a whole unit. The regiment deploys in tailored subunit packages when it supports the ARRC or a British national deployment. The regiment's two tactical EW squadrons deploy under operational control of the supported divisions.

The 640th Troop, if called upon, could deploy under the same command relationship to a supported brigade or the Multinational Division Central (Airmobile). The 226th Signal Squadron is in direct support to the ARRC. This concept of operations is similar to U.S. Army doctrine in having the divisional MI battalion support the maneuver brigades through designated direct support MI companies and the division by a general support MI company. Increase the level of support from brigades and divisions to divisions and corps and you begin to see how the regiment provides EW support.

Regimental Headquarters

The Headquarters Squadron contains the regimental staff, the Electronic Warfare Coordination Cell (EWCC), and logistics support. The Headquarters Squadron is roughly equivalent to the Headquarters, Headquarters and Service Company in a U.S. divisional MI battalion. Normally, when a U.S. MI battalion deploys, the battalion commander directs the efforts of his unit from a battalion tactical operations center. When the 14th Signal Regiment deploys, there is no regimental-level command post or operations center. In an ARRC deployment, the regimental commander deploys to the ARRC's EWCC.

Electronic Warfare Coordination Cell

The regimental EWCC operates out of two 4-ton trucks located near the ARRC G2's All-Source Cell. It consists of an intelligence section and an operations section. Along with the regimental commanding officer, the operations section includes the S3, the assistant S3, and the S2. The intelligence section comprises the assistant S2, the operations warrant officer (an Intelligence Corps warrant officer), and various Intelligence Corps personnel. EWCC functions include—

- ☐ Coordinating the EW effort of assets allocated to the ARRC.
- ☐ Developing and implementing electronic attack (EA) operations when authorized by the corps G3.
- ☐ Disseminating the intelligence products from the 226th Signal Squadron.

The only EW assets the EWCC actually controls are from the regiment's 226th Signal Squadron and a Danish EW company that are put under command of the regiment upon an ARRC deployment. Additional personnel functioning as liaison officers would come to the EWCC from other EW units supporting the ARRC. These liaison officers could be from U.S., Dutch, Danish, or German air, maritime, or ground EW units. As you can see with all the possible nationalities and military services present, the EWCC can provide the capability to coordinate multinational, joint EW operations in support of the ARRC.

226th Signal Squadron

The 226th Signal Squadron is the regiment's Depth EW Squadron. The squadron's primary mission is to provide deep EW coverage of the ARRC area of interest. It provides this support by—

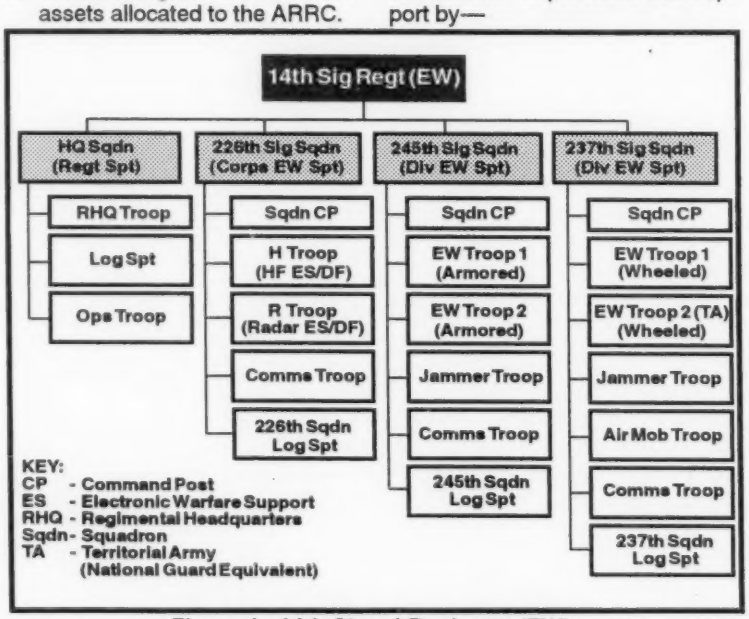


Figure 1. 14th Signal Regiment (EW).

Photo provided by author

Beady Eye radar intercept and DF system.

- **HF Intercept.** The 226th Signal Squadron carries out high frequency (HF) intercept from equipment mounted on a 4-ton truck. This intercept station also acts as a cueing device for the squadron's HF direction-finding (DF) system called Kingfisher.
- **Kingfisher.** The Kingfisher covers the standard NATO military HF band and consists of three low profile stations mounted in British Army landrovers. These stations can operate as part of a multistation DF net or independently using their single-station locating capability. Depending on terrain and atmospherics, the Kingfisher can locate HF signals out to a range of 3,000 kilometers. During Operation DESERT STORM, the system located emitters out to a distance of approximately 2,000 kilometers from its positions in Saudi Arabia.
- **Beady Eye.** The Beady Eye system intercepts and locates battlefield surveillance, artillery, early warning, and air defense radars. The system consists of four sensors, each mounted on a 4-ton truck. The maximum range of the system is 300 kilometers; however, the system is line-of-sight (LOS) dependent. Due to the shorter range of the system, the Beady Eye sensor vehicles will deploy to tactical sites to the rear of a division's main command post. The system's four sensors normally spread across a baseline of 80 kilometers.

The squadron's assets report their intercept and DF results to command and control elements at the squadron's headquarters. After first-line analysis, the squadron relays the information back to regimental personnel at the EWCC at the ARRC headquarters. Intelligence Corps personnel at the EWCC conduct further analysis and pass the intelligence to the Corps G2.

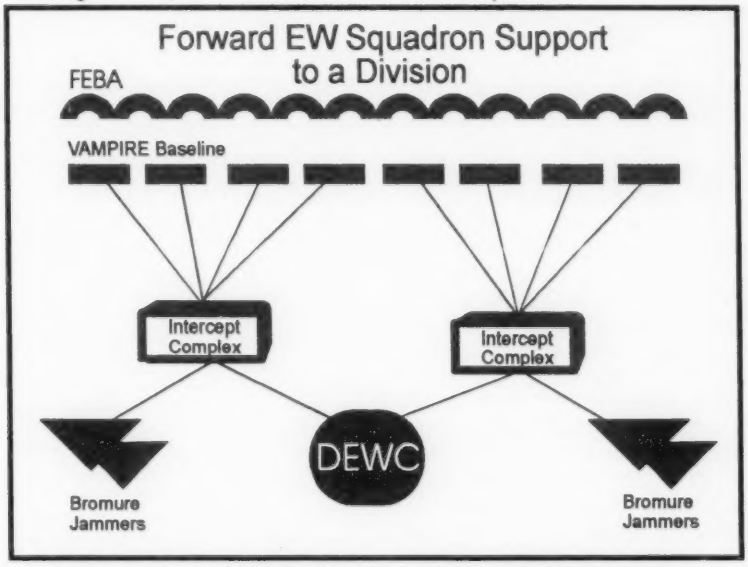


Figure 2. Typical 237th Signal Squadron (EW) Deployment.

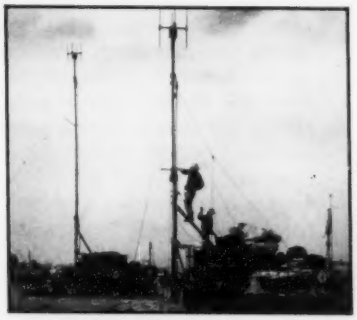


Photo provided by author

Armored VAMPIREs during Operation GRANBY (DESERT STORM).

237th and 245th Signal Squadrons

These two squadrons provide tactical EW support to Britain's two remaining Active Component divisions (see Figure 2). The 237th Signal Squadron supports the U.K. 3d Division, and the 245th Signal Squadron supports the U.K. 1st Armored Division. An important note to remember about these two squadrons is that although they have a training affiliation with their respective British divisions, they could be called upon to support a non-British NATO division deployed as part of an ARRC operation.

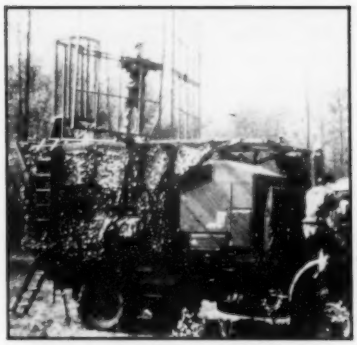
The organization of the two squadrons is basically the same with the main difference being the EW systems' prime movers. The 245th Signal Squadron has the armored vehicle variants while the 237th's EW equipment uses wheeled vehicles. The squadrons support their division commanders with—

- **VAMPIRE.** Located immediately behind the forward edge of the battle area (FEBA) are 8 very-high frequency (VHF) Army Mobile Position Indicating Interferometer Radio Equipment (VAMPIRE) intercept and DF systems. The squadron will deploy these assets across the entire divisional frontage. The VAMPIREs have a working range of 50 kilometers, LOS dependent.
- **Intercept Complex.** An intercept complex, one of two in each squadron, controls four VAMPIRE systems. The inter-

cept complex, comprising five to six vehicles each, locates approximately 5 kilometers behind the FEBA. These complexes are also responsible for collecting hostile communications out to a range of 70 kilometers. The complex analyzes and processes raw information and then passes it to the divisional EWCC.

- **Vixen.** The Vixen is a new EW system that will automate a majority of the squadrons' current manual intercept and DF functions. Beginning in 1995, the Vixen system will replace all the intercept and DF equipment in the 245th and 237th Signal Squadrons (the VAMPIREs and intercept complexes). The fielding and testing of the Vixen equipment will occur over a two-year period. The system will be a quantum leap in tactical EW support capability of the regiment. The fielding of Vixen will force the regiment to totally rewrite its concept of operations for how it supports the ARRC and British national operations.
- **Bromure Jammer.** Each squadron also has four French-made VHF Bromure jammers mounted on 4-ton trucks. These jammers can radiate up to 1 kilowatt of power and attack up to four frequencies simultaneously. They can jam targets in different modes including tones, music, and sound-blocking white noise. Their effective range is up to 40 kilometers, but they are LOS dependent. The VHF Bromures normally operate in pairs and employ a jam and scram method of operation. This allows for a pair of jammers to always be available for a jamming task.

The 237th and 245th Squadron commanders command and control their assets from their EWCCs at the supported division's main headquarters. The squadron commanders are the principal sources of EW support and advice for the division commander. The G2 tasks the squadrons for EA. The regimental EWCC at ARRC headquarters provides the squadrons with database and technical support.



U.S. Army photo

French-made Bromure VHF Jammer.

640th Troop

The 640th Troop is a completely airtransportable, airmobile regimental subunit located with the 237th Signal Squadron. The troop has the capability to intercept; locate; and jam high, very-high, and ultrahigh frequency communications and noncommunications (radar) emitters. The British Ministry of Defense has earmarked this unit to support the Multinational Division Center (Airmobile). The troop also forms the core rapid response EW capability for British national deployments.

Light Electronic Warfare Teams

The regiment has also begun to field small four-soldier Light Electronic Warfare Teams (LEWTs) with the 245th Signal Squadron. Each LEWT has small handheld receivers and hand-emplaced, unattended jammers. The hand-emplaced jammers have a power output of 10 watts and can jam three frequencies simultaneously. The teams support airborne, airmobile, or special forces units. They accompany the forward elements of a rapid reaction force and provide dedicated EW support to the force commander in the very early stages of an operation. The regiment hoped to have a troop of 16 airborne and commando-trained personnel and all of their equipment fully operational by late 1995. The squadron had great success employing these jammers during its three deployments to the Combat Maneuver Training Center at Hohenfels, Germany. Future exercises have the LEWT deploying to France and Italy to support British airborne forces in NATO multinational exercises.

The Future

The 14th Signal Regiment is a leader in developing training and exercising opportunities with other NATO EW units. It has established and maintained relations with the U.S. 103d MI Battalion, the Royal Netherlands Army's 102d EW Company, the Royal Danish Army's EW Company LANDZEALAND, and the German Army's 320th Fernmelderegiment. U.S. MI personnel can learn much from their experiences. We can reap great dividends by continuing and expanding multinational training opportunities with the NATO EW units like the 14th Signal Regiment.

Knowledge is a very powerful tool when used correctly. As future military operations take on more of a multinational structure, it becomes imperative that we know more about the doctrine, tactics, and systems of our NATO Allies. Now is the time to learn and exchange vital information as it will be too late once we deploy in NATO or coalition operations.

Major McPeek is a deputy team chief at the U.S. Transportation Command's Joint Intelligence Center at Scott Air Force Base, Illinois. Major McPeek has served as a battalion S2 and G2 staff officer in the 3d and 24th Infantry Divisions. Prior to his assignment with the 14th Signal Regiment, he served in the 748th MI Battalion as S3 and executive officer. Readers can reach Major McPeek at (618) 256-6723, DSN 576-6723, or via his E-mail at mcpeekr.transcom@transcom.safb.af.

Improving Intelligence Support to Combat Aviation

by Captain Jeffrey A. Steel

The S2s in AH-64 Apache battalions have clear-cut, critical roles during mission planning through intelligence preparation of the battlefield and time analysis. However, they often play little or no role during mission execution. During the battle, they tend to remain in the rear at the tactical operations center (TOC), attempting to listen in on the forward fight. By taking a more active part in the mission, and actually flying in the air tactical command post (ATAC) in a UH-60 command and control (C^2) aircraft, they can provide better support to the mission and play a key role in its execution.

Command and Control

Attack aviation units use several techniques for C^2. This article focuses on those techniques using an ATAC. It does not argue whether "commander in the cockpit" or "commander in the ATAC" is better. Consider three common methods of C^2 using an ATAC:

- ☐ Commander in an Apache and the S3 in the ATAC.
- ☐ Commander in the ATAC and the S3 in the ground-based TOC.
- ☐ Commander in ATAC #1 and the S3 in ATAC #2.

All three methods provide for depth in operational control and mission expertise at every C^2 node. Unfortunately, many units seldom implement the same careful thought when dealing with intelligence and employ the S2 on the ground far to the rear.[1]

The Issue

In most attack aviation battalions, the S2 stays behind in the TOC. He attempts to monitor the battalion operations and intelligence (O&I) net, fire support nets, and his higher headquarters' O&I net. The S2 also consolidates, processes, and disseminates information forward and to higher headquarters. This may sound like quite a bit, but very little actually occurs until gun-tapes processing when the aircraft return.

Several problems exist in this method of S2 employment. The S2 cannot monitor many C^2 and flight operations radio nets because most TOCs currently have no ultrahigh frequency and very-high frequency communications capability. Even if adequate radios are available, the distances and terrain involved often take the aircraft out of radio range, especially when the unit does not dedicate a helicopter to relay functions.

The commander and S3 on the ATAC, along with his fire support officer (FSO), often have trouble monitoring all the radio nets they should. Frequently the unit cannot spare a channel for use as an O&I net. These difficulties result in the S2's failing to contribute more than simple battle damage assessment (BDA) and information transfer to the mission after take-off. When the commander and S3 need S2 assistance, they must call to the rear for an analysis based on what is most often incomplete data.[2]

The Solution

While undergoing the challenges of the Combat Maneuver Training Center (CMTC) near Hohenfels, Germany, the 2-1 Aviation Battalion overcame the problems described above by placing S2 assets as far forward as possible.[3] Full employment of intelligence personnel is the basis for this technique. The S2 section noncommissioned officer (NCO) in charge (NCOIC) remains in the ground-based TOC, fills the role of the S2, and monitors the "big picture." The S2 flies with the fire support officer (FSO) and commander or S3 in the ATAC. Fully integrated and trained threat officers (pilots) fly with the companies.[4,5]

Expertise in the Right Place

When the Apache battalion S2 accompanies the ATAC forward, communications and teamwork improve. Most importantly, having the S2 in the ATAC places intelligence expertise where it makes a difference. The S2's expertise contributes timely assistance where and when the units need it the most. **FM 101-5, Staff Organization and Operations**, states—

The most important function of the staff is to provide the commander timely, accurate, and critical information. The integration of staff functions will assist the commander in synchronizing combat power—at the right

place, at the right time—during the course of battle.

By having the S2 in the ATAC, the commander has his expertise where he needs it most, contributing timely assistance directly to the commander and the S3 during the battle. The S2 processes information on the spot and can confer directly with the commander, S3, and FSO.

During any mission, the S2 is immediately on hand to advise the unit on the meaning of reports and where best to concentrate flight information collection assets. If the S2 is on the ground in the rear, he can only compile the selected reports that overworked flight crews have time to send back. The S2 cannot process data and track aircraft movements without a constant stream of transmissions in both directions. This becomes just an extra burden on the command structure.[6,7]

Improved Communications

From his forward position, the S2 has better communications with all elements concerned. Due to radio monitoring options of the ATAC, the S2 requires no O&I net and the unit can conserve a radio frequency. The S2 can get his information first hand by monitoring any or all flight nets.

Not only can the S2 fulfill his own communication and information needs but he can also act as a second set of ears for the commander and S3. They may have to monitor up to four nets on a standard UH-60 configuration, or up to seven on a special C^2 aircraft. Often it is beyond human ability to monitor and fully comprehend so many simultaneous transmissions. The S2 can assist with monitoring and identifying key pieces of information.[8]

Finally, it reduces the number of transmissions because the S2 can process data in the ATAC, only transmitting critical information to the rear.

Depth and Survivability

Redundancy and duplication of skills assure depth for function and survivability. With the S2 forward, the S2 section members are active at all levels and at all C^2 nodes:

- ☐ S2 in the ATAC.
- ☐ S2 NCOs at the TOC.
- ☐ Threat officers with each forward company commander.

There are always intelligence experts present when and where an echelon requires their skills. The loss of any one C^2 node, even the ATAC, will not fatally cripple the unit's intelligence capability.[9]

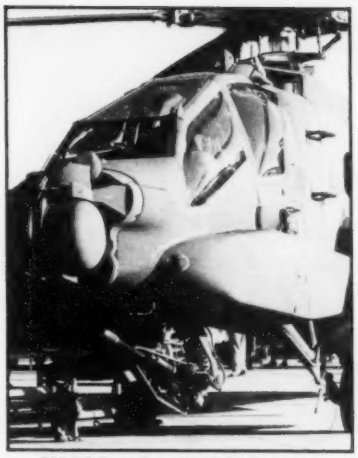
Team Building

Team building is another advantage of fully employing the S2 section that goes beyond the tactical arena. Too often in aviation units, ground personnel develop a different group identity from that of flight personnel. Another group separation occurs between the planners and the executors. Whether the S2 is an aviator or not, this procedure draws the S2 section closer into the mission it spends so much energy planning. S2 personnel will have better knowledge of the air crews' information requirements and realize what intelligence the crews are capable of providing.

When S2 section members accompany a mission, they gain intimate insight into the concerns, problems, and methods of the flight crews. Simultaneously, the S2 personnel now become accessible team members to the aviators. They inevitably will feel closer to the mission and the persons flying it. Crews will appreciate the more personalized service. They will not see the S2 as simply a staff officer, locked in the TOC with no knowledge of the real mission.[10]

Conclusion

The attack aviation battalion S2 can contribute significantly during flight mission execution by placing himself forward with the commander and S3 in the ATAC. By doing so, the unit gains significantly in communications, teamwork, depth, and synchronization. Communications will not hamper the S2's information. His location will make access to his expertise easy for the unit. Overall, the S2 will be a key member of the team.



U. S. Army photo

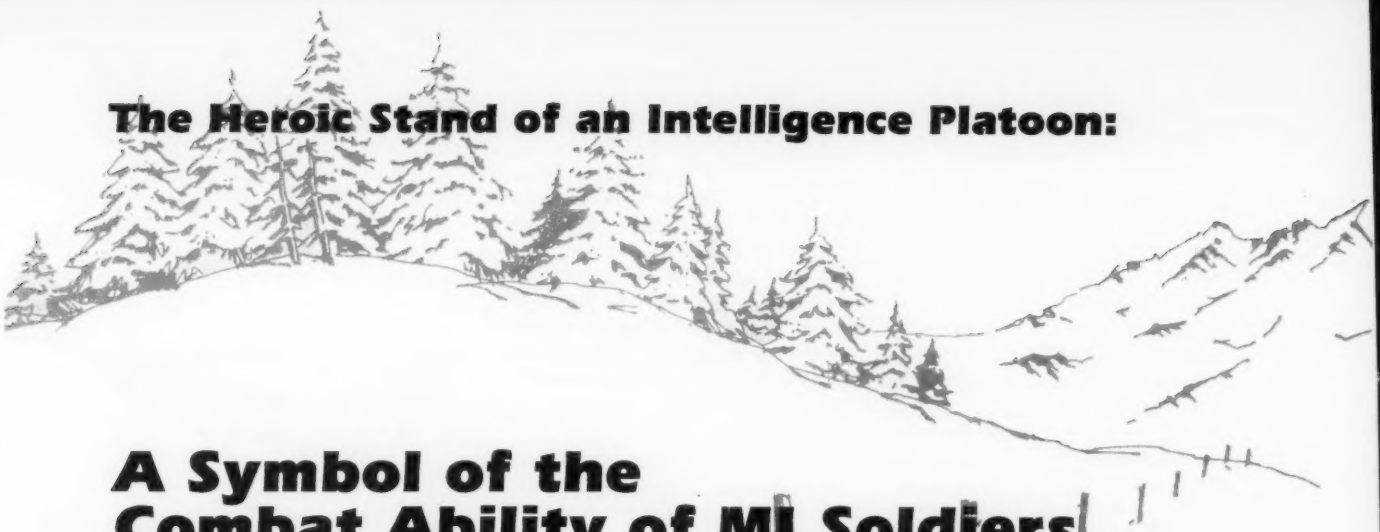
AH-64 Apache attack helicopter.

Endnotes:

1. **FM 1-112, Tactics, Techniques, and Procedures for the Attack Helicopter Battalion**, February 1991.
2. Major Mark Valentine, Executive Officer, 2-1 Aviation Battalion, 1993-1995, interviews by author.
3. Lieutenant Colonel Oliver H. Hunter III, Commander, 2-1 Aviation Battalion, 1993-1995, interviews by author.
4. Chief Warrant Officer Two Steve Middaugh, Senior Threat Officer, 2-1 Aviation Battalion, 1993-1995, interviews by author.
5. Sergeant First Class Francis Rhiel, S2 NCOIC, 2-1 Aviation Battalion, 1992-1995, interviews by author.
6. **FM 101-5, Staff Organization and Operations**, May 1984.
7. **FM 34-8, Combat Commander's Handbook on Intelligence**, September 1992.
8. Hunter, interviews with author.
9. **FM 100-5, Operations,** June 1993.
10. **FM 22-102, Soldier Team Development**, March 1987.

Captain Steel is currently the Chemical Branch Assistant Team Chief at the U.S. Army Readiness Group-Pittsburgh in Oakdale, Pennsylvania. He previously served as the battalion S2 for the 2-1 Aviation Battalion in Katterbach, Germany. He attended three CMTC rotations and evaluated the S2 section of the first 24-ship Apache Aviation Restructuring Initiative Battalion. Readers can contact him at (412) 777-1267 or DSN 242-1267.

The Heroic Stand of an Intelligence Platoon:



A Symbol of the Combat Ability of MI Soldiers

by Captain John Della-Giustina

On 16 December 1944, Nazi Germany commenced its last great offensive of World War II against the thin line of U.S. Army defenders in the Ardennes forest. The crucial Battle of the Bulge lasted until 28 January 1945, but the majority of the heavy fighting occurred during December and was among the most ferocious of the entire war. This campaign produced many acts of bravery and demonstrated the courageous character of the American fighting spirit.

One of the most gallant combat actions was that of an intelligence and reconnaissance (I&R) platoon's defense near Lanzerath, Belgium, on the first day of the battle. For their exploits, the I&R Platoon, 394th Infantry Regiment, 99th Infantry Division, would later become *"the most heavily decorated platoon for a single action in World War II."*[1] Their incredible story is a prime example of how tactical intelligence leaders and soldiers should be able to accomplish any mission required in combat.

Organization

An intelligence and reconnaissance platoon was organic to each infantry regiment during the war. The 25 soldiers in the platoon consisted of 2 9-man reconnaissance squads and a 7-man headquarters section who worked in the regimental S2 section.[2] The platoon's primary mission:

> *To serve as the special intelligence agency of the regimental commander for the collection of information under the supervision of the regimental intelligence officer (S2)....To accomplish this mission and to provide the regimental commander with vital information of the enemy, the platoon must operate patrols, man observation posts, and coordinate the intelligence activities of the regiment.*[3]

In simpler terms they were the "eyes and ears" of the regiment. But on the first day of the Battle of the Bulge, the 394th Infantry Regiment's I&R platoon faced the entirely different mission of direct combat.

Disposition

The untested 99th Infantry Division and its three subordinate regiments entered the front line in the quiet Ardennes sector in mid-November 1944. The 394th's I&R platoon leader, 20-year old First Lieutenant Lyle J. Bouck, Jr., and several of his men were among the first group in the regiment to receive the Combat Infantryman's Badge for actions during one of their initial pa-

trols.[4] Until early December, they conducted numerous reconnaissance patrols and manned various observation posts. On 10 December, the regimental commander, Colonel Don Riley, sent the entire 18-man platoon to the vicinity of Lanzerath to observe the area and provide warning of enemy movement on the regiment's right flank.

The assigned position also coincided with the 99th Division's and V Corps' right boundary. To the south was the 14th Cavalry Group of VIII Corps. The location the I&R platoon chose was in the woodline northwest of the small village of Lanzerath. This was actually across the corps boundary, but Lieutenant Bouck was not aware of this. The position offered good observation to the highway, which ran north through Lanzerath to the main defensive positions of the regiment, and to the east towards the town of Losheim just inside the German border.

In the tree line, Bouck's soldiers found well-dug foxholes left by another American unit. Over the next five days the platoon improved its position, developed a strong defensive plan, sent out patrols, and ran a communication line to the regimental command post. However, it conducted little coordination with a tank destroyer section from the 14th Cavalry Group which had set up in Lanzerath about 200 yards to the southeast.

The I&R platoon also gathered many weapons to supplement its authorized M1 rifles. These weapons included Browning automatic rifles, a .30-caliber light machine gun, and a great amount of ammunition and hand grenades. In addition, the platoon brought its one organic heavy weapon, a .50-caliber Browning machine gun, mounted on one of its seven jeeps. On 16 December, the platoon thus had "a sustained firepower capability" which was essential to its defense.[5]

Contact

In the early morning of 16 December, the German army commenced its attack with a huge rolling artillery barrage which lasted about two hours. The I&R platoon suffered minimal damage in its heavily protected foxholes, but the shelling cut their landline communications to regiment. Several minutes after the artillery stopped, the two exposed American tank destroyers in Lanzerath withdrew to the rear. Thus, the I&R platoon was the sole front-line unit along the corps boundary guarding an important avenue of approach into the sector. By SCR-300 radio, the regiment ordered them to maintain their position and to send a patrol down to Lanzerath.

The patrol observed the German-held town of Losheim, to the east, from the upstairs of one of the houses in Lanzerath. Soon they saw a large German formation emerge out of the fog marching to the southwest. If this German unit turned north at the first major intersection, they would march through Lanzerath on the road directly in front of the I&R platoon's position and into the unprotected flank of the regiment.

After observing the size of the German force, those returning from the patrol wanted to withdraw to the rear but Lieutenant Bouck ordered the soldiers to their foxholes. He believed their strong defensive arrangement might be able to delay the Germans. He also called for artillery fire on the marching column as it turned north, but there was no support available due to German attacks throughout the division sector.

As the column marched through the tiny town of Lanzerath, Bouck allowed a small group of soldiers to pass and march to the north. He recognized the Germans' uniforms as belonging to a paratrooper unit. As the main body arrived and halted, Bouck noticed three men, one of whom appeared to be the commander. But before the I&R platoon was able to commence firing on the German force, a teenage girl ran out of a house to the command group and stated something to them while pointing in the general direction of the I&R position.

The second attack again decimated the German unit.

A German then quickly barked an order to the column, and they dove into roadside ditches. The Ameri-

cans had held their fire because of the presence of the girl, and thus lost an excellent opportunity to ambush the column. Fire erupted almost immediately from both positions.[6] The battle of Lanzerath had begun.

Battle

The German force initially attempted to frontally assault the I&R platoon's defensive position. They attacked across a snow-covered, gently rising field that was over a hundred yards long and bisected by a fence. The snow superbly camouflaged Lieutenant Bouck's foxholes along the woodline. Each fighting position provided interlocking fields of fire with the others. The I&R soldiers had zeroed their automatic weapons on the fence line which ran parallel to their location. Furthermore, the .50-caliber machine gun was in a defilade position and could easily interdict reinforcements coming from the south. Despite the advantages of this defensive position, the Germans continued to attack across the open field with devastating results for the paratroopers.

The fighting between the 18 men of the I&R platoon and a German battalion from the 9th Regiment, 3d Parachute Division, raged all day. The Germans attempted three separate concerted assaults at Lieutenant Bouck's positions and the Americans repulsed them each time.

After a pause to recover their wounded, the German paratroopers started another attack. Lieutenant Bouck again radioed for artillery support, but was not given any because of other priorities. When Bouck asked what he should do without artillery, he was told to "hold at all costs." A few minutes later enemy fire ripped through the I&R platoon radio making it inoperable.[7]

Despite heavy fighting, the I&R platoon's status was good. Only one soldier had been wounded. He was hit in the face by a rifle grenade, which miraculously failed to explode. The second attack again decimated the German unit. The paratroopers managed to bring in some mortar support, but the I&R platoon was safe in their covered foxholes. The third attack by the Germans in the afternoon yielded the same outcome. Hundreds of German soldiers lay dead in the snow. The Germans had been unable to approach the I&R position. Several U.S. soldiers had exhibited extreme boldness to prevent penetrations of their perimeter.

As the afternoon continued the I&R platoon's efforts started to wane. Many soldiers had been up most of the night, and the day's fighting had exhausted them. Some were also running low on ammunition. A U.S. field artillery forward observer had shown up but helped the situation little due to the confusion caused by the German attack throughout the Ardennes sector. Lieutenant Bouck sent two soldiers to regimental headquarters for reinforcements or orders to withdraw. They were both captured before reaching the headquarters.

Lieutenant Bouck planned to withdraw his platoon when they had expended all ammunition. However, as dusk arrived on 16 December, about 50 paratroopers flanked the platoon's position and were quickly inside the perimeter. The Germans moved to each foxhole clearing them out as they went. A German soldier fired into Bouck's position hitting the lieutenant in the leg and seriously wounding his foxhole mate in the face. Every platoon member became a prisoner, except one who was killed in action.

Consequence

The engagement at Lanzerath was over but its effect was astounding. The 18 men of the I&R platoon had inflicted between 400 and 500 casualties, decimating an entire battalion of the German 3d Parachute Division. The platoon had halted the mission of the paratroopers to rapidly break through the American front and allow armored units of the German main effort—the Sixth Panzer Army—immediate access to open roads toward the Meuse River On the night of 16 December, the 9th Parachute Regiment in Lanzerath failed to continue to the west. They feared heavy resistance from American defenses such as they had encountered from the I&R platoon.

Just after midnight, German Lieutenant Colonel Joachim Peiper, commander of the 1st SS Panzer Regiment, 1st SS Panzer Division—the spearhead of the Sixth Panzer Army's drive for Antwerp—arrived in Lanzerath. He had been delayed by horrendous road traffic, blown bridges, and the tenacious defensive operations by the units of the 394th Infantry Regiment, including the I&R platoon. Irate at the lack of progress, Peiper ordered his force forward at about 0400, some 18 hours behind schedule. The delay altered the crucial timetable for Peiper and other Panzer units. This situation allowed the U.S. Army valuable time to counter the German main thrust in the north. Although Peiper's unit progressed the furthest of any Sixth Panzer element, the Americans defeated the remainder of the German divisions in what became the critical northern shoulder of the bulge. The Germans shifted their main effort to their Fifth Army to the south for the remainder of the campaign.[8]

The tiny I&R platoon had been the anchor of the 394th Regiment's and 99th Division's front-line defense on 16 December. Without their heroic stand, the battalion of German paratroopers they defeated would have attacked into the flank of the 1st Battalion, 394th Infantry Regiment, which was defending the vital road junction at Losheimergraben. Perhaps they would have turned northwest against the regiment's understrength 3d Battalion instead (see the map on page 29). This would have reinforced the 12th Volksgrenadier Division's offensive against these positions and probably overwhelmed the southern flank of the 99th Division on the first day. Panzer exploitations of this opening in a quick drive to the Meuse River thus would have been possible.

Recognition

Due to the capture of the I&R platoon soldiers and the blur of events during the first week of this massive campaign, the U.S. Army did not recognize the platoon for its coura-

geous deeds for thirty-seven years. In 1969, John S. D. Eisenhower, a participant in the campaign and son of the Supreme Allied Commander, published **The Bitter Woods** which detailed the platoon's bravery. In the late 1970s, congressional and presidential interest, and an article by columnist Jack Anderson, focused on the Army's oversight of the platoon's actions. Finally, in October 1981, the Army awarded the Presidential Unit Citation for Extraordinary Heroism to the I&R platoon. Lieutenant Bouck and three other men received the Distinguished Service Cross, five others the Silver Star, and the nine remaining platoon members who fought at Lanzerath received the Bronze Star with a Valor Device. The platoon thus became World War II's most decorated for a single enemy engagement.[9]

One historian succinctly summarized the I&R platoon's exploits stating, "The I&R platoon's action exemplifies the determination of the American soldier and what he can do when properly prepared, motivated, and led." Their conduct offers military intelligence soldiers and leaders a superb example of the initiative, adaptability, and bravery necessary when faced with any combat situation.[10]

Endnotes:

1. John R. Finch, Lieutenant Colonel, U.S. Army (Retired) and Major George J. Mordica II, "Miracles: A Platoon's Heroic Stand at Lanzerath," in **Combined Arms in Battle Since 1939** (Fort Leavenworth, Kansas: U.S. Army Command and General Staff College Press, 1992), 179.

2. **Table of Organization and Equipment 7-12, Headquarters and Headquarters Company, Infantry Regiment** (Washington D.C.: War Department, 26 February 1944), 2-3.

3. **Organization, Equipment, and Tactical Employment of the Infantry Division** (United States Forces, European Theater, The General Board, 1945), 5. Because of their unit name, primary mission, subordination under the regimental S2, and focused training in reconnaissance and surveillance, World War II officers considered I&R platoon members as intelligence soldiers. Although most were basic infantrymen, they went through rigorous tactical intelligence scouting, patrolling, and observation training. Some units sent their I&R platoons through the Division Intelligence Course at the Military Intelligence Training Center, Camp Ritchie, Maryland. The platoon often consisted of the brightest and most physically fit soldiers in the regiment. In 1944, many soldiers from the Army Specialized Training Program filled the ranks of I&R platoons throughout the Army.

4. **Special Orders Number 240** (Belgium, APO 449, U.S. Army: 394th Infantry, 22 November 1944), 2.

5. Finch and Mordica, 175.

6. Charles B. McDonald, **A Time for Trumpets: The Untold Story of the Battle of the Bulge, The Greatest Single Victory in U.S. Army History** (New York: William Morrow and Company, 1985), 177.

7. John S.D. Eisenhower, **The Bitter Woods: The Dramatic Story Told at All Echelons, from Supreme Commander to Squad Leader, of the Crisis That Shook the Western Coalition—Hitler's Surprise Ardennes Offensive** (New York: G.P. Putnam's Sons, 1969), 188-189.

8. Finch and Mordica, 177-178; Eisenhower, 192-193.

9. Gerald Astor, **A Blood-Dimmed Tide: The Battle of the Bulge by the Men Who Fought It** (New York: Dell Publishing, 1992), 479-486; **General Orders Number 26** (Washington D.C.: Headquarters, Department of the Army, 29 October 1981); Finch and Mordica, 178-179.

10. Finch and Mordica, 179.

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Text Of The Presidential Unit Citation (Army) For Extraordinary Heroism To The Intelligence and Reconnaissance Platoon, 394th Infantry Regiment, 99th Infantry Division

The Intelligence and Reconnaissance Platoon, 394th Infantry Regiment, 99th Infantry Division, distinguished itself by extraordinary heroism in action against enemy forces on 16 December 1944 near Lanzerath, Belgium. The German Ardennes Offensive which began the Battle of the Bulge was directed initially against a small sector defended by the Intelligence and Reconnaissance Platoon. Following a two-hour artillery barrage, enemy forces of at least battalion strength launched three separate frontal attacks against the small Intelligence and Reconnaissance Platoon of 18 men. Each attack was successfully repelled by the platoon. The platoon position was becoming untenable as casualties mounted and ammunition was nearly exhausted. Plans were made to break contact with the enemy and withdraw under cover of darkness. Before this could be accomplished, a fourth enemy attack finally overran the position and the platoon was captured at bayonet point. Although greatly outnumbered, through numerous feats of valor and an aggressive and deceptive defense of their position, the platoon inflicted heavy casualties on the enemy forces and successfully delayed for nearly 24 hours a major spearhead of the attacking German forces. Their valorous actions provided crucial time for other American forces to prepare to defend against the massive German offensive. The extraordinary gallantry, determination, and esprit de corps of the Intelligence and Reconnaissance Platoon in close combat against a numerically superior enemy force are in keeping with the highest traditions of the United States Army and reflect great credit upon the Unit and the Armed Forces of the United States.

Project Pathfinder:

Breaking the Barriers to More Effective Intelligence Analysis

by Timothy B. Hendrickson and Major Michael G. Knapp, USAR

The views expressed in this article are those of the authors and do not reflect the official policy or position of the National Ground Intelligence Center, the Department of the Army, Department of Defense, or the U.S. Government.

In early October 1994, Iraq moved Republican Guards Forces Command units to the Kuwaiti border. As the crisis develops, U.S. decisionmakers attempt to judge whether Saddam Hussein will order his forces into Kuwait again, as he did in the summer of 1990. A small team of National Ground Intelligence Center (NGIC) analysts applied new analytical software technology to the problem in an attempt to predict possible Iraqi intentions. Within hours of receiving the short-fuzed tasking, team members conducted a detailed comparison of information from 1990 and 1994. Based on that comparison, the team made some key conclusions on Iraqi intentions (more on this later).

Before this technology was available, such analysis of thousands of disparate pieces of multisource information would have been done manually, unable to keep pace with rapidly changing situations, and would not have provided the desired results to decisionmakers in time. Moreover, the comparative analysis would have been next to impossible without this software innovation because of the serious limitations in the human brain's ability to assimilate large amounts of information at one time.

Challenges and Constraints

A working environment that is difficult and demanding as never before confronts today's intelligence analyst. The nature of the threat has changed significantly with the end of the Cold War; the rise in regionalized, smaller-scale conflicts; and the increasing proliferation of highly destructive weapons and related critical technologies. This environment has brought about a corresponding change in organization and employment of the U.S. military. Our forces are now predominantly based in the United States and employed on short notice as joint and combined service teams with a broad range of missions from conventional combat to operations other than war. Each of the Services must remain ready to support two major conflicts simultaneously, yet must also continue to downsize and reorganize!

The defense and national intelligence communities have also had to evolve in this atmosphere of increased tensions and uncertainty. Analysts must be able to work faster and smarter but with fewer resources while continuing to provide effective and timely support to their many customers. Today's analytical environment is characterized by a number of dynamics that affect how the analyst can operate. These include—

- ☐ **Information Overload.** Vastly increased amounts of information, particularly from open sources, and in more varied forms are increasingly competing for analysts' time. (The more varied formats, provided through multimedia and interactive networked systems, have capabilities that include digitized imagery, sophisticated graphics, and integrated video and audio.) There is already more data from classified sources available than can be read. When combined with unclassified information, this flow of data is likely to become a tidal wave. Analysts thus will fall farther and farther behind in their ability to evaluate incoming as well as archived information for suitability or further use. This situation will continue unless analysts employ a new analytical mindset that enables them to tap into as many sources as possible to ensure appropriate coverage and treatment of their subject areas.
- ☐ **Increased Complexity.** The information analysts seek is often highly technical. The application of statistical analysis or complex computer models is often needed to arrive at the

predictive estimates, trends, and patterns customers require.

- **Declining Resources.** All intelligence community organizations need to maximize their analytical efforts in the face of downsizing, reorganizations, and budget cuts. Analysts have less time to devote to intelligence production due to reductions in supporting assets such as computer systems and basic data prcessing equipment.
- **Increased Customer Requirements.** The customer's information and analysis requirements are more specific than in the past in both the amount and type. Customers have also become more diverse. The amount of ad hoc, unprogrammed requirements is exceeding anticipated and resourced requirements in many organizations.
- **Broadcast Intelligence.** Increasingly, emphasis is on broadcast "Cable News Network-type" video connectivity. This type of broadcast intelligence mechanism aids coordination and also real-time dissemination between producers and customers for cogent analysis on fast-breaking events. Briefings must be well-focused, hard-hitting, and visually attractive to compete with other media clamoring for the decisionmaker's attention.
- **Product Changes.** In addition to increased timeliness and availability, analysts are designing "softcopy-only" products for electronic dissemination. These digital products must be short in length, focused, "bottom-line-up-front" documents that contain embedded imagery, graphics, and other nontextual media.
- **Tactical Support.** Intelligence is a key component of an informed, demanding warfighting commander's decision support system. Intelligence organizations must push automated analysis capabilities and access to theater- and national-level intelligence farther downward to the operational- and tactical-level warfighter. This will improve the responsiveness, interoperability, and information-sharing ability of the intelligence system at all levels to meet the individual commander's unique requirements.
- **Technological Advances.** Technological advances include rapid and continuous computer hardware and operating software improvements, increased standardization of systems, and greater electronic connectivity and sharing of resources. These advances have paved the way for a wider use and acceptance of, and common development of improvements to, sophisticated analytical toolsets that can offset organizational resource shortfalls.
- **Visualization.** Analysts no longer have the luxury of scanning each document that comes in or is in the archives. They must use graphically based, computerized capabilities. These systems enable the recognition and exploitation of often complex relationships between ideas, documents, and groups (clusters) of related documents, and the ability to perform such operations on large amounts of data in real time. By decreasing the amount of time required to evaluate and process information through visualization, analysts acquire greater analytical opportunity and enhanced productivity. Text extraction and concept-based retrieval tools will also be needed to improve analytical capabilities.

Built by and for Analysts

The analytical software toolset mentioned in the real-world scenario at the beginning of this article, and the one which most closely appears to address the analyst's operating constraints described above, is Project Pathfinder. The NGIC created Pathfinder analytical software as a user-friendly, developmental program. It provides analysts with automated tools and methods to process, analyze, and integrate information drawn from any U.S. Government, commercial, or public domain database. Pathfinder enables its users to drastically reduce the time spent on projects (in many cases, from months to days or days to hours) by exploiting significantly larger amounts of information than was possible before. Users are able to sort, arrange, compare, retrieve, and visualize the contents of thousands of documents at a time.

The program's UNIX-based environment provides multiuser, windowing, and graphics capabilities that allow simultaneous use of multiple tools. Its large disk space and high processing speed increase analyst efficiency. The Pathfinder software also provides administrative tools to manipulate, edit, delete, and share databases. This encourages analysts to work as a team, to share relevant data among team members, to rapidly assimilate new information, and to quickly identify data important to the analysis problem.

Pathfinder's focus is on aiding analysis of data in electronic form, thus reducing the burden of hardcopy analysis. Pathfinder lets analysts easily search for, collate, and cross-reference information for presentation in related subsets. This reduces the time spent searching for desired information, increases user understanding of the data, and allows more time to perform true analysis. Pathfinder's relational tools allow relationships of people, facilities, or other user-defined entities to be easily seen and used as a guide for more detailed investigation. The program automates the process of loading electronic media into a database, organizing the data for analysis, and identifying relationships which permits users

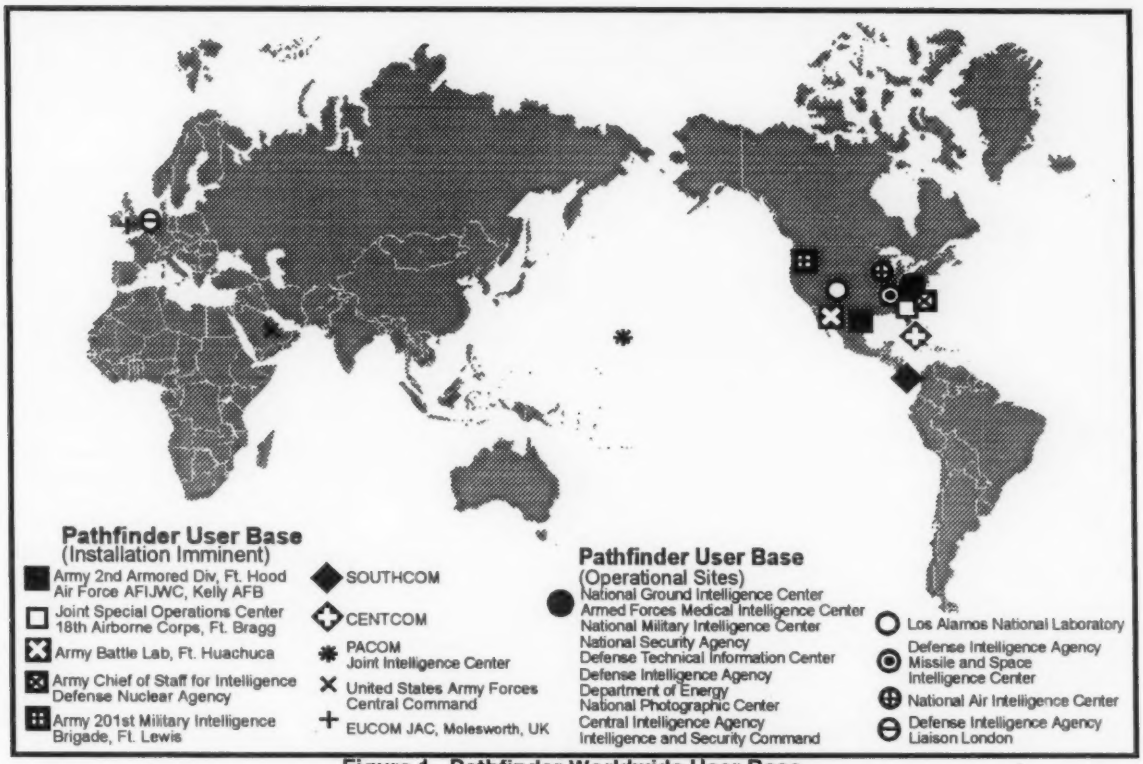


Figure 1. Pathfinder Worldwide User Base.

to visualize information and draw conclusions.

Analysts conceptualized and designed all of these capabilities. We view this aspect of Pathfinder's development philosophy—user control of development priorities and establishment of requirements—as the fundamental reason for its success. The philosophy also stipulates that Pathfinder is not a new database, but its design allows more effective use of existing ones. The Project Pathfinder Study Advisory Group, which meets bimonthly, is open to any analyst in the intelligence community. Pathfinder software is available free of charge to any United States Government intelligence agency that requests it. However, NGIC can provide the necessary commercial off-the-shelf hardware and software only as its budget allows. Although contributions from member agencies keep the program viable and responsive, this is not a prerequisite for joining Pathfinder. The NGIC is continually seeking opportunities to form partnerships with other government or industry programs that have similar goals and objectives.

The current version of Pathfinder (Version 7.0) emphasizes the near-real-time exploitation of large textual information streams. This version supports advanced data preparation software; document clustering and visualization; advanced text retrieval including refined searching and query-by-example; and link analysis tools such as NETMAP and the Analysts' Notebooks, both commercially developed visualization and link analysis tools that permit the display of complex data relationships.

Other improvements featured in Pathfinder 7.0 are replacement of the OpenWindows graphical user interface with Motif; connections to the NAIC's Foreign Technology Data Base; and a Personal Information Manager, a government-developed organization tool that uses icons to represent and link information for generating reports and other products.

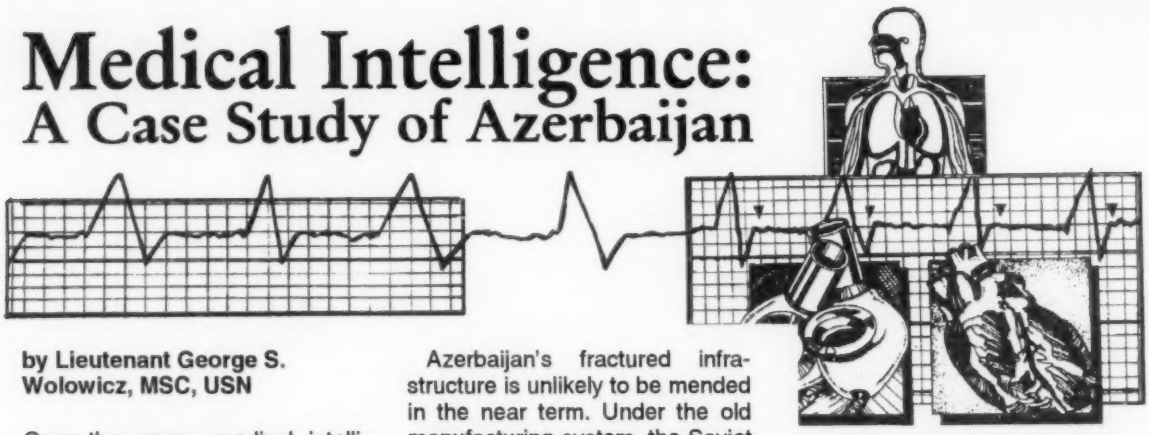
Pathfinder is considered a leader in analytical tool programs; it is a rapidly growing user base (which has doubled in the past year) reflecting its widespread acceptance and utility (see Figure 1). The NGIC's Pathfinder Project Office and the supporting vendor's design team create annual development plans. These plans provide an adequate support of the current program in the field through on-site installation, maintenance, hotline support, comprehensive testing procedures, and a vigorous training program. The plans also provide for parallel expansion of program capabilities through a detailed layout of goals, milestones, and future requirements.

Goals for Pathfinder Version 8.0 next year include the following broad performance enhancements:

- ☐ Portability to other hardware platforms.

(Continued on page 50)

Medical Intelligence:
A Case Study of Azerbaijan



by Lieutenant George S. Wolowicz, MSC, USN

Over the years, medical intelligence has become a key component in formulating U.S. policy for providing humanitarian assistance to various countries worldwide. Medical intelligence has been defined as *"That category of intelligence resulting from the collection, evaluation, analysis, and interpretation of foreign medical, biotechnological, and environmental information."*[1] It is relied upon by military medical planners and strategic decisionmakers in assessing force readiness, combat operations, and humanitarian mission involvement in a foreign environment. One of the driving forces behind such assistance is the protection or enhancement of U.S. strategic interests. Although U.S. policymakers would likely give an unqualified denial for such intervention, there can be no doubt that a *quid pro quo* national interest is paramount to the granting of aid. Azerbaijan provides a valuable case study for providing humanitarian assistance for reasons other than goodwill.

Azerbaijan's (see Figure 1) rapid transition to economic and social independence has placed a severe strain on its health care delivery system. Two issues now threaten the viability of the Azerbaijani medical system:

- ☐ A fractured and incomplete medical infrastructure.
- ☐ Civil strife with the Armenians over the Nagorno-Karabakh Autonomous Oblast.

Azerbaijan's fractured infrastructure is unlikely to be mended in the near term. Under the old manufacturing system, the Soviet government apparatus established a partial processing of products by outlying republics with final manufacturing and packaging done in Soviet centralized plants. As a result of this incomplete infrastructure, Azerbaijan now relies on foreign humanitarian assistance for medical supplies, drugs, and vaccines to support its health care delivery system.[2]

Pseudo-Altruism

Various countries are providing assistance for two specific purposes: global goodwill and furthering strategic interests. Although aid has been readily pouring into Azerbaijan, foreign assistance is not purely altruistic. With the breakup of the former Soviet Union, investment opportunities abound for foreign businesses. Concerning Turkish involvement, there exists an overwhelming Turkic influence in Azerbaijan.[3] As such, Turkey, by supplying humanitarian assistance, is hoping to capitalize on its Turkish influence to increase investment and trade opportunities. Conversely, Iran is attempting to seize an opportunity to exploit breakdowns in the political, economic, and social structures in Azerbaijan. Although Islam is experiencing a resurgence throughout Central Asia, few Central Asian Muslims have yet to be attracted to an Islamic political agenda.

The query then becomes whether U.S. humanitarian assistance itself can be covered with an altruistic blanket. U.S. humanitarian contributions surely go beyond the scope of goodwill. For example, last year alone Operation PROVIDE HOPE delivered 66 metric tons of medical supplies worth $7.2 million to Azerbaijan.[4] The U.S. Department of Defense (DOD) delivered excess DOD medical supplies to Baku for distribution to area hospitals.[5] All this assistance most assuredly has an underlying *quid pro quo*. For instance, Azerbaijan has vast oil and gas reserves off the coast of the Caspian Sea. Estimates indicate that Azerbaijan, with an investment partner, has the potential to produce 700,000 barrels of crude oil per day.[6] With the U.S.'s appetite for petroleum and its desire to quell any potential spread of Islamic fundamentalism into Central Asia, U.S. policy formulation protecting or enhancing these strategic interests is likely tied to humanitarian assistance efforts.

Aid Restrictions

Although the U.S. Government may be providing assistance to Azerbaijan to support its strategic interests, the U.S. Government is severely restricted on getting Azerbaijan involved in the humanitarian assistance effort. Section 907 of the Freedom Support Act restricts the U.S. Government's assistance to Azerbaijan. It states

that *"humanitarian and technical assistance may be provided to the Azerbaijani people through non-governmental organizations, or directly by the U.S. government, as long as the provision of the assistance does not require the involvement of the Azerbaijani government."*[7]

Thus, there exists a fine line between altruistic and strategic motives. Even though strategic motives may guide U.S. policy formulation for humanitarian assistance in Azerbaijan, it must be careful not to tie such assistance to a political agenda which would violate U.N. policy.

Medical Intelligence and Humanitarian Assistance

With this backdrop to U.S. involvement in the humanitarian effort for Nagorno-Karabakh, we can now look at how medical intelligence plays a valued role in U.S. policy formulation for foreign intervention by providing assistance. One way that medical intelligence plays a key role is by evaluating other intervention efforts. As an example, a report from Radio Baku, an Azerbaijani radio station, described Turkey's intentions to provide drugs, medical supplies, doctors, and other medical personnel to Azerbaijan to treat those wounded in the fighting over Nagorno-Karabakh.[8] That particular radio broadcast also noted that medical supplies were being unloaded from the United Arab Emirates, along with medical and surgical supplies to later be delivered from Iran. The importance of this type of information is that U.S. policymakers can use it to evaluate the significance of the event or crisis. Policymakers can also evaluate the level of the medical crisis to determine if U.S. or allied personnel are in harm's way. In addition, such information helps U.S. policymakers identify other foreign sources of intervention. Again, the importance of this piece of information is that U.S. policymakers can evaluate other countries' reasons for intervention. Where another country's intentions appear other than altruistic and the United States has a strategic interest in a given area, U.S. policy for intervention then becomes paramount.

Figure 1. Map of Azerbaijan and its Neighbors.

Another way that medical intelligence plays a valued role in U.S. policy formulation for humanitarian assistance is by establishing a human intelligence collection effort with refugees. Medical intelligence collected from these sources can provide U.S. policymakers with two key elements of information:

- ☐ Essential information on whether or not current humanitarian efforts are sufficient or effective.
- ☐ Whether local governments or forces are impeding humanitarian efforts.

This type of information would then allow U.S. policymakers to either restructure their efforts or redirect their involvement with humanitarian elements currently located in the area of concern.

A third way medical intelligence plays a valued role in U.S. policy formulation for humanitarian assistance is through the indications and warning (I&W) process. By assessing regional stability, U.S. policymakers can earmark humanitarian assistance in an effort to protect U.S. national security interests. Since a country's populace generally supports its political apparatus, the earmarking of humanitarian assistance to support Azerbaijan's political agenda and aiding the population would enhance support of U.S. strategic interests in Azerbaijan. Through the I&W process, one can readily see that political, economic, and social indicators can drive U.S. policy formulation for protecting its security interests.

Conclusion

Medical indicators can be very persuasive in dictating policymakers' decisions. The civil war in the Nagorno-Karabakh region is undermining social reforms, economic stability, and creating a

heavy burden on Azerbaijan's health care delivery system. Without a healthy populace, economic stability is tentative at best. Furthermore, unless the war over the Nagorno-Karabakh Autonomous Oblast ends soon, Azerbaijan will not have a medical system to treat its indigenous population. Some of the medical intelligence indicators that drive policymakers' decisions for humanitarian assistance in the I&W process are increased aid from neighboring countries like Iran that are attempting to undermining U.S. strategic interests; continued reliance on foreign aid; increase in hospital occupancy rates; regional epidemic and endemic occurrences; depletion of hospital inventories; immunization and vaccine requests for children; nonavailability of fuel and electricity to support hospital facility operations; a growing refugee problem; and out-migration of health professionals. Policymaker's decisions for U.S. intervention in Azerbaijan based on such indicators will not only provide much needed assistance to Azerbaijan's populace but also will surely muster support in furthering and protecting U.S. strategic interests in Azerbaijan.

The relative importance of medical intelligence in U.S. policy formulation cannot be overstated. By assessing a country's political, economic, and social situation, and its affects on its indigenous population, the United States can muster support in protecting its strategic interests through the instrument of humanitarian aid.

Endnotes:

1. **FM 8-10-8, Medical Intelligence in a Theater of Operations**, July 1989.

2. Center for International Health Information, **Azerbaijan: USAID Health Profile**,USAID Health Information System, 24 April 1992.

3. Defense Mapping Agency. **Major Muslim Ethnic Groups in Armenia, Iran, and the Islamic Commonwealth States**. Map. Washington, DC: GPO, 1992.

4. Defense Intelligence Agency. **Fact Sheet: U.S. Assistance to Azerbaijan as of 8/31/93**. Message to the American Embassy, Baku. R 250120Z September 1993 (U).

5. Ibid.

6. Faulkner and Gray, Inc., **1993 European Business Directory: A Comprehensive Resource Guide for Doing Business in Western and Eastern Europe**. New York: Thompson, 1993.

7. Defense Intelligence Agency, untitled. Message to the Secretary of State dated 061400Z December 1993 (U).

8. Foreign Broadcast Information Service. **Turkish Medical Aid Received in Nagorno-Karabakh**. (NC1003200192 Baku Radio Baku Network in Azeri, 1800 GMT 10 March 1992). Translation by Foreign Broadcast Information Service, FBIS Daily Report--Central Eurasia, FBIS-SOV-92-049; 12 March 1992, 71.

Lieutenant Wolowicz is a Medical Service Corps officer currently assigned to the Sixth Fleet, Gaeta, Italy, as the Medical Planning Liaison to STRIKEFORCE-SOUTH, Allied Forces, Southern Europe. His previous assignment was as the Eurasian Medical Capabilities Analyst, Armed Forces Medical Intelligence Center (AFMIC), Fort Detrick, Maryland. He is a recent graduate of the Post-graduate Intelligence and Master of Science in Strategic Intelligence Programs at the Joint Military Intelligence College, Washington, District of Columbia.

Thanks, Pythagoras:
How to Visualize Three Dimensions On Your Two-Dimensional Map

by Captain Mark R. Smith

After concluding my enemy situation brief, my battalion commander asked me about the dimensions of the engagement area on the ground of a specific antiaircraft gun system if the gun was fully depressed below the horizon. After I recovered from the "deer in the headlights stare," I told him frankly that I did not know, but that I would figure it out, wistfully hoping he would not take me up on it. As expected, he told me that was a fine idea, "Do so."

Since I did not have any of the fancy software-based terrain analysis tools, I was forced to use the stubby-pencil method. I remembered only too well that math, let alone geometry, was not my strong suit in high school. Nevertheless, I rolled up my sleeves and began going over the principles I had learned in high school geometry to turn the two-dimensional map in front of me into a three-dimensional tool.

Pythagorean Theorem

What came to mind was a theorem the Greek philosopher and mathematician Pythagoras (or one of his students) had proven in the 6th century B.C.E. The theorem states that—

AA + BB = CC

In other words, the square of the hypotenuse of a right triangle is equal to the sum of the squares of its other two sides.[1] Knowing this, I could use the maximum effective range of the weapon system, and the system's altitude (assuming the weapon is set up perpendicular to the ground) to figure out the base of this right triangle and determine the maximum effective range on the ground. I manipulated the theorem to:

AA (altitude/height) + BB (base/length) = CC (hypotenuse/maximum effective range) to CC - AA = BB.

Minimum Effective Range

Once I had determined the weapon's maximum effective range, I could figure out its minimum effective range. For this

task, I needed a protractor and to know the weapon system's maximum depression below the horizon.

I measured the angle formed by the height (altitude) and the hypotenuse (maximum effective range). Then I compared the angle to the maximum depression below the horizon. If the angle was not at its maximum depression below the horizon, I redrew the angle and the hypotenuse to the maximum depression below the horizon. I thus established the minimum effective range of the weapon system and figured out the engagement area of the weapon system on the ground.

If the angle was already at its maximum depression below the horizon, then I knew that the maximum and minimum effective ranges were the same. If the angle was below the weapon system's maximum depression below the horizon, then I knew that the weapon system's maximum and minimum effective range would not be on the ground. Once I figured out the weapon system's engagement area, I then determined the key to defeating or avoiding the weapon system—its dead space.

Effects of Altitude

During my calculations I realized that the altitude of the weapon system affected the size of the weapon system's engagement area (see Figure 1). I noted that the higher the weapon system's altitude, the smaller the engagement area, and the larger the dead space. However, the higher the altitude of the weapon system, the lower the probability of plunging fire being degraded by obstacles between the weapon system and the target.

Conclusion

Knowing the enemy engagement area of any direct fire system allows me to brief the commander on how to optimize his use of the terrain. Knowing the enemy engagement area also aids the warfighter in defeating the weapon system by capitalizing on the weakness of the weapon system, its dead space, and turning the weakness into a vulnerability.

Thanks, Pythagoras.

Endnote:

1. Bruce E. Meserve, Grolier Electronic Publishing, Inc., 1992.

Captain Smith is the S2, 1st Battalion, 503d Infantry Regiment (Air Assault), 2d Infantry Division, at Camp Casey, Republic of Korea. He will complete his present tour in February 1996 with a follow-on assignment to the XVIII Airborne Corps, Fort Bragg, North Carolina.

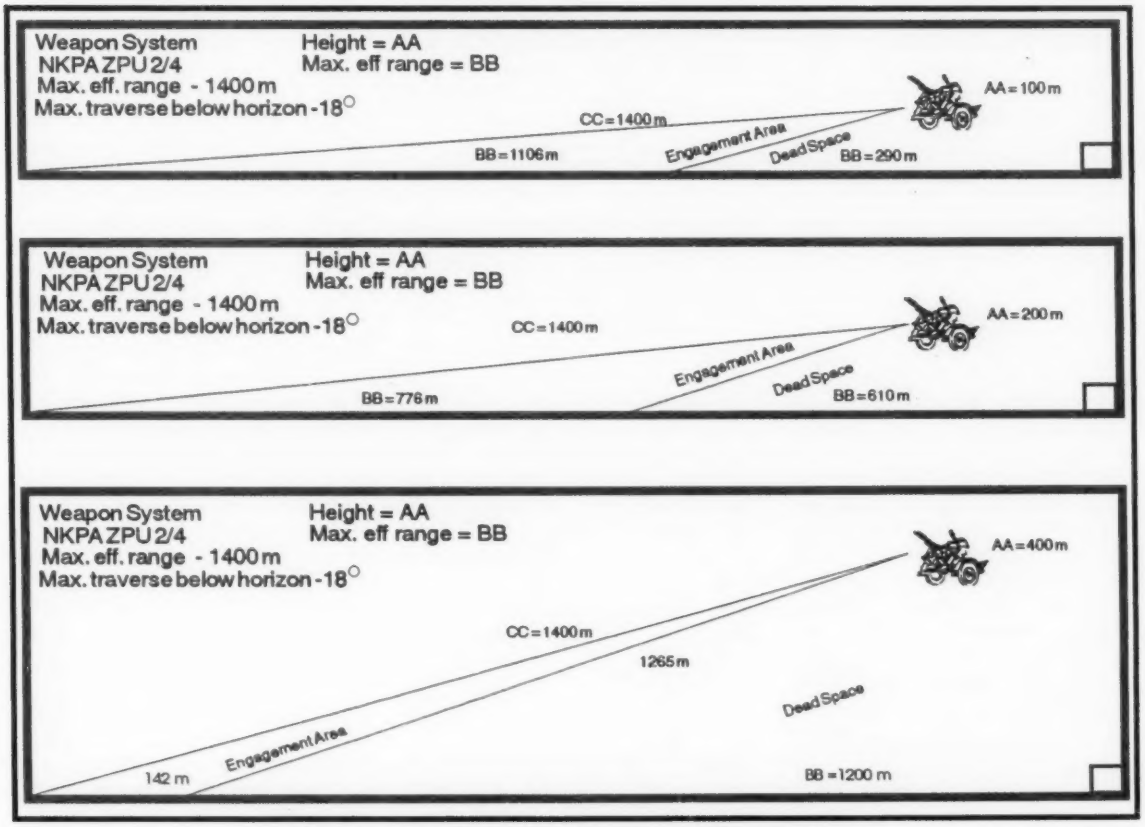


Figure 1. Sample Area of Engagement Computations.

One Team, One Vector

Reserve Component Intelligence

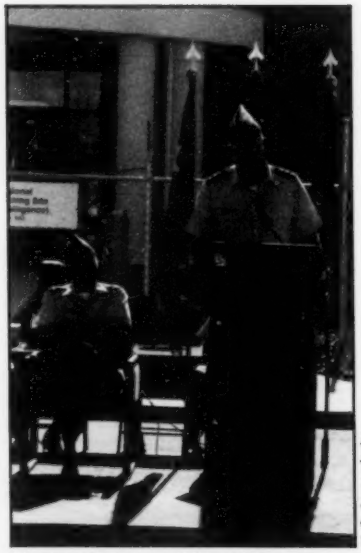
by Lieutenant General Paul E. Menoher, Jr.

Editor's Note: Lieutenant General Menoher delivered the following comments at the dedication ceremony for the Regional Training Site for Intelligence-West, Camp Parks, California, on 9 August 1995.

Our Army—America's Army—has undergone amazing changes in recent years as we have adjusted to the new world order and integrated new technology. We have gotten significantly smaller, and in the process have withdrawn a large portion of our forward deployed forces to become a predominantly continental United States (CONUS)-based, power projection Army today.

Since the fall of the Berlin Wall, we have reduced from 780,000 soldiers with 18 divisions in the active Army to slightly over 500,000 soldiers today with only 12 and soon only 10 divisions. U.S. Army intelligence has undergone similar changes, reducing its manpower by more than 30 percent in the same time frame. But, as has happened in the larger Army, we have actually improved our capabilities in the process by leveraging technology, integrating new systems, developing new operational concepts and new doctrine, and redesigning our organizations to make them smaller, scalable, and more deployable.

It is a good thing that we have improved our capabilities, because the world is even more dangerous now than it was during the Cold War. As a consequence, our operational commitments and optempo have increased by 300 percent since the fall of the Berlin Wall. Despite our increased capabilities, we cannot satisfy all the demands for intelligence in the Army with our Active Component personnel alone.



U.S. Army photo

Lieutenant General Menoher was the keynote speaker at the site dedication.

The complex nature of today's world order, the wide range and ever-increasing number of our operational requirements, and the increased demands of force projection operations—all of this could overwhelm the Army's intelligence capabilities unless we can bring to bear the outstanding talent in our Guard and Reserve military intelligence (MI) force. We must have U.S. Army Reserve (USAR) and Army National Guard (ARNG) MI soldiers work with us in a coordinated division of intelligence labor.

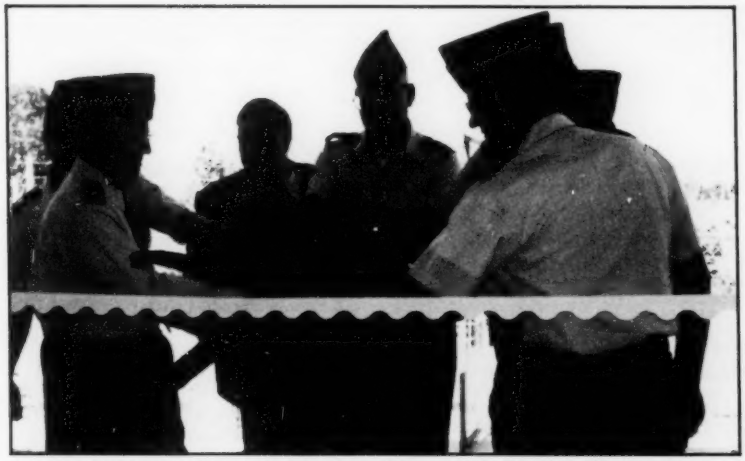
With this goal in mind, we have embarked on an aggressive and multifaceted program in which the Regional Training Sites for Intelligence (RTS-I) will serve a major role. Before commenting on the specifics of that critical role, let me first describe the other facets of our approach.

Force Redesign

First, we have redesigned the Guard and Reserve MI force in a Reserve Component force design update that the Army leadership approved in the spring of 1995. This effort redesigned every ARNG and USAR MI organization supporting echelons above division, not in a mirror image of the Active Component, but in modular, functional organizations. These elements will enable us to access the great talent in the USAR and ARNG in those specific skills and numbers needed to complement the active force. These new organizational designs concentrate on people, not equipment; as they come into effect in the next 18 months, we must ensure that these units and their great people are truly trained and ready to mobilize and deploy on short notice.

Peacetime Use

Second, we are capitalizing on the Department of Defense (DOD) peacetime utilization plan that the Deputy Secretary of Defense approved in January 1995. This is a plan to enhance peacetime use of the ARNG and USAR MI force. It reinforces the realization at the highest levels that we can get added value from the ARNG and USAR MI force by applying their great talent and capa-



U.S. Army photo

Lieutenant General Menoher cuts the ribbon, dedicating the Western Regional Training Site for Intelligence at Camp Parks, California, on 9 August 1995.

bilities in peacetime, as well as crises and war. We are talking about live missions in a coordinated division of labor with the active force, which will provide great training through operational opportunities focused on collection and production to satisfy real-world requirements.

Resource Increase

Third, we are working to obtain better resourcing to provide additional work-days for ARNG and USAR intelligence soldiers, and to obtain the automation and connectivity necessary to enable them to perform their live missions. This is a good news story and represents a significant departure from the past. At the highest levels, our leaders are recognizing that without increased resourcing to fund additional pay for the ARNG and USAR and bring in state-of-the-art intelligence automation and communications connectivity, all of our efforts to achieve integration will fail.

Let me emphasize that contributory support is not new; the ARNG and USAR have been doing this for years. What we are talking about is doing it on a much larger scale. This year alone, between the General Defense Intelligence Program and the Defense Intelligence Reserve Program, we have brought more than $2.7 million, or 30 work-years of additional capability to bear on our intelligence requirements.

Examples of the contributions made as a result of this investment include—

- ☐ Military capabilities studies for every theater.
- ☐ Updated intelligence databases.
- ☐ Linguist support to the National Security Agency, major exercises, and strategic debriefings.

A significant amount of this support emanated from the RTS-Is, and we can do more with more resources.

Connectivity Increase

The final area in which we have invested is increased connectivity. Over the past three years, significant resources have been made available to provide state-of-the-art automation and communications connectivity that will provide the ARNG and USAR MI elements with a gateway to our national intelligence agencies and systems. This is critical to realizing the full "value added" of the ARNG and USAR MI force, and to achieving a shared collection and production effort.

All told, the DOD utilization plan provides more than $31 million in the Five-Year Defense Plan for providing intelligence automation and communications systems for our RTS-Is and other locations. With this connectivity, the options available to the ARNG and USAR increase significantly, to include the ability to conduct annual training and even mobilize at the home station. It will also provide significantly expanded inactive-duty training capabilities.

The RTS-Is provide the secure facilities that will serve as a focal point for this activity, enabling the ARNG and USAR to access and interact with the entire U.S. intelligence community. In short, they will provide ARNG and USAR MI soldiers the opportunity to train on and operate the same systems and databases as their active counterparts.

One Team, One Vector

I think throughout this discussion, the value and pivotal role the RTS-I must play in our program has become clear to you. The bottom line is they will serve as the cornerstone of our whole program.

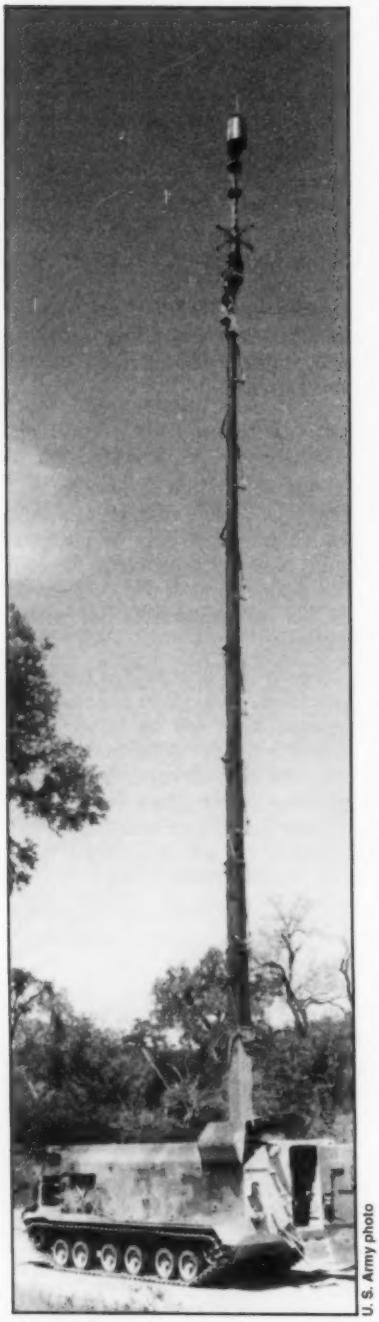
The ARNG and USAR have always been critical to our national defense, and will be even more so in the future. With this new facility, we can develop and leverage their great talent even more, making the ARNG and USAR full partners in an integrated and shared intelligence effort.

My vision is one team, pursuing one coherent vector, supporting our great nation wherever it needs us. With great facilities like this and the great talent you bring to it, we will make that vision a reality.

Lieutenant General Menoher is currently the U.S. Army Deputy Chief of Staff for Intelligence (DCSINT). He served as the Commander, U.S. Army Intelligence Center and Fort Huachuca, Fort Huachuca, Arizona, from 1989 through 1993. Readers who wish more information may contact the DCSINT Directorate of Reserve Affairs at (703) 695-0778, DSN 225-0778, or E-mail mccluree@pentagon-hqdadss.army.mil.

CONCEPTS & DOCTRINE

Electronic Battle Space Domination: The IEWCS Systems



U.S. Army photo

Ground-Based Common Sensor-Heavy.

by Major William F. Morgan, Jr.

The Intelligence and Electronic Warfare Common Sensor (IEWCS) systems will provide the division commander with an organic capability to detect, intercept, identify, precision locate, target, surgically jam, and exploit for situation and target development both threat voice and digital communications and noncommunications in the high frequency through the super high frequency radio spectrum. These systems will provide the division commander with a new robust capability to "own the electronic spectrum" and dominate his battle space.

Open Architectures

The IEWCS systems use open system architectures to accommodate rapid technology insertion to keep pace with changes in threat characteristics worldwide. The IEWCS is a grouping of subsystems designed to revolutionize the way the Army does targeting, electronic attack (EA), and electronic warfare support (ES) at the division level. The four integrated subsystems are—

- ☐ TACJAM-A (ES).
- ☐ TACJAM-A (EA).
- ☐ Common Modular Electronic Intelligence System (ES).
- ☐ Communications High Accuracy Location System-Exploitable (CHALS-X).

The following subsystems are integral components of the three Army IEWCS systems:

- ☐ AN/MLQ-38, Ground-Based Common Sensor-Heavy (GBCS-H).
- ☐ AN/MLQ-39, Ground-Based Common Sensor-Light (GBCS-L).
- ☐ AN/ALQ-151(V)3 Advanced QUICKFIX (AQF).

When fielded, these IEWCS systems will replace the following divisional intercept, location, and jamming systems in the force structure:

- ☐ AN/ALQ-151(V)2 QUICKFIX IIB.
- ☐ AN/MLQ-34 TACJAM.
- ☐ AN/MSQ-103 TEAMPACK.
- ☐ AN/TLQ-17A TRAFFICJAM.
- ☐ AN/TRQ-32 (V)2 TEAMMATE.
- ☐ AN/TSQ-138 TRAILBLAZER.

U.S. Army photo

Ground-Based Common Sensor-Light.

Mobility

For deployment with heavy divisions, the GBCS-H will be mounted on an Electronic Fighting Vehicle System (EFVS). The EFVS is a member of the Bradley family of fighting vehicles. Major components of the EFVS are common to the M2 Bradley and M993 Multiple Launch Rocket System. The GBCS-H will be deployable on C-17 and C-5 transport aircraft.

The GBCS-L will be mounted on a heavy variant of the High Mobility Multipurpose Wheeled Vehicle for deployment with light divisions. The GBCS-L will be deployable on C-130, C-141, C-17, and C-5 transports.

Found in the division aviation brigade, the AQF will be mounted in the Army's EH-60L, a variant of the Army's UH-60 BLACKHAWK utility helicopter. The AQF will be capable of self-deployment.

Interoperability

The GBCS-H and GBCS-L will interoperate with the AQF to precisely acquire and locate targets within the division commander's battle space. The divisional analysis and control element will accomplish automated tasking using the All-Source Analysis System via the Tasking and Reporting Data Link (TRDL). In addition, the division will transmit technical situational awareness and targeting information via the TRDL. The IEWCS systems will send targeting information using the Combat Net Radio with Applique to the Army Field Artillery Tactical Data System at the fire direction center or fire support element. Situational awareness and targeting data can also go to the Common Ground Station at the brigade level.

The IEWCS design also supports interoperability with the U.S. Marine Corps' Mobile Electronic Warfare Support System, an IEWCS system itself. Together, these Army and Marine Corps systems will provide the commander with a seamless, near-real-time targeting system that can cross Service lines in joint warfighting situations.

U. S. Army photo

Advanced QUICKFIX heliborne EA and ES subsystem of the IEWCS systems.

Current Status

The GBCS-L will undergo its initial operational test and evaluation in August 1996. The GBCS-H and the AQF will be part of that test in order to demonstrate the systems' interoperability. In 1997, the Army will begin fielding the GBCS-L and AQF to the 313th Military Intelligence Battalion, 82d Airborne Division. The GBCS-H will enter the force structure in fiscal year 2002. The end date of IEWCS fielding is sometime around 2010, depending on funding profiles.

Bottom Line

When fielded, the Army IEWCS systems will replace six tactical IEW systems. The return on the investment in IEWCS will be 46 percent fewer operators, 65 percent fewer vehicles, 60 percent less airlift capacity required, simplified logistics and maintenance operations, and greatly enhanced IEW capabilities and interoperability to cover the commander's battle space.

Major Morgan is currently a test and evaluation officer with the Project Manager Signals Warfare. His E-mail address is mmorgan@vinthill-pmsw.army.mil.

Update on FM 100-60 Opposing Force Series Manuals

by Donald L. Madill, Ph.D.

The U.S. Army Publications and Printing Command (USAPPC) has rescinded the FM 100-2 series on the Soviet Army. To replace that series as the baseline documentation for the opposing force (OPFOR) portrayal in U.S. Army training venues, the Threat Support Directorate (TSD), Office of Deputy Chief of Staff for Intelligence, U.S. Army Training and Doctrine Command (TRADOC) has produced the **TRADOC 350** series pamphlets on the capabilities-based OPFOR. These pamphlets serve as coordinating drafts for the new **FM 100-60** series of manuals on opposing forces. In March 1995, the TRADOC Deputy Chief of Staff for Training directed the interim implementation of the 350-series pamphlets, pending the final publication of this material as field manuals (FMs).

The TSD produced these pamphlets in limited quantity and distributed them only to G2s and threat managers. TSD has no more copies of **TRADOC Pamphlets 350-12** and **350-13**, and only small numbers of the other pamphlets in stock. If any organization received these pamphlets in the initial distribution between September 1993 and October 1995, they are authorized and encouraged to reproduce them locally. Sergeant Paul A. Stier at

(913) 684-7921 or DSN 552-7921 is the TSD point of contact for dissemination of these TRADOC pamphlets.

TSD has now begun preparing the first six pamphlets for publication as field manuals. The FM titles now reflect Force XXI terminology. The heavy OPFOR is now the armor- and mechanized-based OPFOR, and the light OPFOR is now the infantry-based OPFOR. The future FMs will be condensed to two organization guides, **FM 100-63** and **FM 100-60**, both likely to be ready for Army-wide dissemination around the 3d quarter, fiscal year (FY) 1996. The rest of the series will appear later in FY 96 or FY 97.

All Army publications account holders should determine their requirements for copies of each of the **FM 100-60** series manuals for all organizations within their respective units or activities and place advance orders. Units must use Department of the Army (DA) Form 12-11-E with the following subscription block numbers in Part V:

- ☐ **FM 100-60, Armor- and Mechanized-Based Opposing Force: Organization Guide** (replaces the U.S. Army Combined Arms Command (CAC) and Fort Leavenworth Pamphlet 350-1, which later became TRADOC Pamphlet 350-12). DA Form 12-11-E block number 5358.
- ☐ **FM 100-61, Armor- and Mechanized-Based Opposing Force: Operational Art** (replaces TRADOC Pamphlet 350-14). DA Form 12-11-E block number 5362.
- ☐ **FM 100-62, Armor- and Mechanized-Based Opposing Force: Tactics** (replaces TRADOC Pamphlet 350-16). DA Form 12-11-E block number 5363.
- ☐ **FM 100-63, Infantry-Based Opposing Force: Organization Guide** (replaces CAC and Fort Leavenworth Pamphlet 350-2 which later became TRADOC Pamphlet 350-13). DA Form 12-11-E block number 5359.
- ☐ **FM 100-64, Infantry-Based Opposing Force: Operations and Tactics** (replaces TRADOC Pamphlet 350-15 and 350-17). DA Form 12-11-E block number 5364.
- ☐ **FM 100-65, Opposing Force Equipment Guide** (not published as a TRADOC Pamphlet). DA Form 12-11-E block number 5360. Note: This FM may include multiple volumes on different types of equipment. Customers ordering block number 5360 will receive all volumes as they become available.
- ☐ **FM 100-66, Opposing Forces in Peace and Conflict** (working title) (there was no TRADOC pamphlet version). Order using the DA Form 12-11-E block number 5365.

If your unit or activity has a valid need for these manuals, update your subscription service as soon as possible to automatically receive them. Complete DA Form 12-99-R (DA Form 12-Series Subscription Change Sheet) citing the form and block number (as listed above) and the quantity required. Submit subscription updates through normal publications initial distribution channels.

Dr. Donald L. Madill, (913) 684-7926 or DSN 552-7926 is the TSD point of contact for the **FM 100-60** *series. The USAPPC point of contact for distribution of the FM series is Ms. Rosita Effinger, (703) 325-6232 or DSN 221-6232.*

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MI CORPS HALL OF FAME

Nominations

The Office of the Chief of Military Intelligence (OCMI) accepts nominations for the Military Intelligence (MI) Corps Hall of Fame throughout the year. Anyone can nominate an individual for induction into the MI Corps Hall of Fame. Commissioned officers, warrant officers, enlisted soldiers, or civilians who served in a U.S. Army intelligence unit or intelligence position are eligible.

The OCMI can provide detailed information on the nomination process. If you wish to nominate someone, please contact Commander, U.S. Army Intelligence Center and Fort Huachuca, ATTN: ATZS-MI (Mr. Chambers), Fort Huachuca, AZ 85613-6000; or call (520) 533-1178 or DSN 821-1178.

Point of contact: Captain Santistevan, ATZS-MI, (520) 533-1180, DSN 821-1181, PROFSI santiste@for3083. army. mil.

Congress Lifts the Veil of Secrecy

The OCMI recently assisted the United States Congress and Senator Daniel K. Akaka (Hawaii) with information supporting legislation for MI Corps Hall of Fame (HOF) members. Due to the secrecy of their missions, some HOF members never received recognition for their valorous actions. In addition, strict time limits for submission of military awards have prevented many MI personnel from consideration for various awards, including the Medal of Honor.

Senator Akaka proposed, and the Senate passed, legislation that would allow a one-time look back into the records of intelligence personnel who served during World War II to see whether they deserve decorations and awards. At the request of Senator Akaka's office, OCMI compiled a list of MI Corps Hall of Fame members whose contributions did not receive acknowledgment during World War II and would benefit from Senator Akaka's legislation. With the approval of this legislation, MI Corps Hall of Fame heroes like Lieutenant Colonel Richard Sakakida and Colonel Carl Eifler will receive a second chance to be recognized for their service to this country.

Point of contact: Captain Santistevan, ATZS-MI, (520) 533-1180, DSN 821-1181, or PROFS santiste@for3083.

PROPONENT NOTES

Branch Qualification

The question most frequently asked of the Officer Issues Branch in the Office of the Chief of Military Intelligence (OCMI) is "What does it take to be branch-qualified in MI?" **Department of the Army (DA) Pamphlet 600-3, Commissioned Officer Development and Career Management**, 8 June 1995, provides guidance on the official MI branch qualifications. The pamphlet describes—

- ☐ Schooling and operational assignments.
- ☐ Career development philosophy, trends, and patterns by grade that qualify MI officers for retention, promotion, and school selection.
- ☐ Branch qualifications by grade.

Each level denotes duty positions which keep an officer on a competitive career path. The tremendous diversity of MI assignments at all levels allows for multiple successful career development paths. Ultimately, it is the goal of MI officer professional development to produce and sustain sufficient qualified officers to accomplish tactical, operational, and strategic intelligence assignments. The qualifications listed in Figure 1 are direct extracts from **DA Pamphlet 600-3** for company- and field-grade officers.

MI Reserve Component (RC) officers have a different career development path because of varying duty position opportunities; however, RC MI officers should also pay close attention to the branch qualification standards found in **DA Pamphlet 600-3**. The RC intelligence officer will follow a life-cycle assignment pattern of professionally challenging and upwardly mobile intelligence assignments, culminating in senior intelligence officer status. Key intelligence positions within the RC are the same as for Active Component MI officers.

Career management for MI officers is a team effort that includes active participation by MI branch personnel at U.S. Total Army Personnel Command (PERSCOM), OCMI, and the career officer. All MI officers should take an active role in mapping out a successful

Company Grade Qualifications

- ☐ Have at least 24 months' experience in a troop assignment (defined as any assignment at corps level or below, special forces (SF) group or below, or in a U.S. Army Intelligence and Security Command brigade).
- ☐ Successfully complete the MI Officer Transition Course (branch detail and transfer officers).
- ☐ Successfully complete the MI Officer Advanced Course.
- ☐ Successfully complete both the resident and nonresident phases of the Combined Arms and Services Staff School.
- ☐ Have a minimum of 12 months experience at the tactical level (defined as any assignment at corps level or below or SF group or below).
- ☐ Serve 36 months in any MI-coded captain or higher level assignment.
- ☐ Demonstrate proficiency in captain-level common and Military Qualification Standard (MQS) II tasks.
- ☐ Note that while not required for branch qualification, all company grade officers should strive for assignment as battalion S2s or company commanders.

Field Grade Qualifications

Major

- ☐ Complete resident or nonresident Command and Staff College.
- ☐ Serve at least 24 months in any MI-coded major or higher level assignment.
- ☐ While not required for branch qualification, MI majors should strive for assignment as brigade S2s, Deputy G2s, MI battalion executive officers or S3s, and analysis and control element (ACE) chiefs.

Lieutenant Colonel

- ☐ Serve at least 24 months in any MI-coded lieutenant colonel or higher level assignment.

Colonel

- ☐ Serve at least 24 months in any MI-coded colonel or higher level assignment.

Figure 1. Requirements for MI Branch Qualification.

career path by staying familiar with **DA Pamphlet 600-3**. With total participation and successful performance, a long and enjoyable career can be yours.

Point of contact: Captain Dannewitz, (520) 533-1180, DSN 821-1180, or PROFS dannewit@for3083.

Warrant Officer Standards of Grade Tables

In April 1995, the MI warrant officer Standards of Grade (SOG) tables underwent revision as part of the Warrant Officer Leader Development Action Program II. The U.S. Army Force Integration Support Agency published the changes to the SOG in the Notice of Future Change (NOFC) W-9510-1 and also in the October 1995 update to **DA Circular 611, Implementation of Changes to the Military Occupational Classification and Structure**. MI commanders should review their authorization documents to assure their grading is in accordance with the SOG. Units must identify positions by rank (e.g., CW2, CW3, CW4, and CW5) instead of warrant, senior warrant, and master warrant officer. They must also enter additional skill identifiers (ASIs) and special qualification identifiers (SQIs); failure to do so may result in deletion of the ASI or SQI.

Chief Warrant Officer Five (CW5) positions that appear on the revised SOG are now in the unit base table of organization and equipment documents. Units which should document MI CW5 positions include—

- ☐ Corps and echelon-above-corps MI brigades.
- ☐ Joint commands (e.g., U.S. Army Central Command, Pacific Command, European Command).
- ☐ Major command headquarters (e.g., U.S. Army Intelligence and Security Command; U.S. Army Forces Command; U.S. Army, Europe).
- ☐ U.S. Army Intelligence Center and Fort Huachuca.
- ☐ Defense Intelligence Agency.
- ☐ National Security Agency.
- ☐ DOD-level activities (e. g., On-Site Inspection Agency).

Units must document all CW5 positions prior to the end of fiscal year (FY) 1996. Failure to do so may result in reduction of MI CW5 authorizations.

Change to Warrant Officer Accession Prerequisites

Effective 1 November 1995, the following additional prerequisites are necessary for all personnel applying for appointment in warrant officer military occupational specialty (MOS) 350-series. Applicants must—

- ☐ Take the Test of Adult Basic Education (TABE) and attain a minimum score of 12.0 in the reading and language portion of the examination.
- ☐ Include certified copies of their test scores with the applications.
- ☐ Have served successfully in a supervisory or leadership position for one year.
- ☐ Include the last three noncommissioned officer (NCO) efficiency reports (NCOERs), reflecting outstanding and exceptional duty performance in the feeder MOS.
- ☐ Be eligible for worldwide deployment.
- ☐ Along with Army physical fitness test (APFT) scores and height and weight information, enter the following statement in block 42 of **DA Form 61 (Application for Appointment)**, signed by the applicant's company commander: *"I certify that I have reviewed this application and that [sergeant or staff sergeant applicant's name] is worldwide deployable."*
- ☐ When possible, enclose a written endorsement from a senior warrant officer in the accession MOS who had direct supervisory knowledge of the applicant's leadership abilities and technical expertise.

Applicants for positions in MOS 351B (Counterintelligence Warrant Officer) with ASI G9 (Defense Against Sound Equipment), or P8 (Polygraph Operations)

must state if they only wish consideration for accession to fill an authorization for MOS 351BW (Technical Surveillance Countermeasure Technician) or MOS 351BK (Polygraph Operator). These applicants will include the following statement: *"I request that my application only be boarded for accession into the warrant officer program as a 351BK/351BW."* If the applicants' **DA Forms 61** do not include this statement and the board selects them, applicants will receive appointments as MOS 351B (Counterintelligence Warrant Officer) and assignment in accordance with the needs of the Army. Applicants should understand that by limiting themselves to accession as 351BKs or 351BWs they are reducing their chances for accession into the warrant officer program.

Warrant Officer Points of Contact

The following are key points of contact for warrant officers and prospective warrants:

- ☐ Chief Warrant Officer Four Gerry A. Walters is the new MI Warrant Officer Career Manager at the PERSCOM Warrant Officer Division. He is a 351B (Counterintelligence Warrant Officer) and was previously Chief, G2/CI, 1st Cavalry Division, Fort Hood, Texas. Readers can contact him at DSN 221-5242 or commercial (703) 325-5242.
- ☐ Chief Warrant Officer Five Rex A. Williams is the new MI Professional Development Manager in the OCMI. He is a 350B (All-Source Intelligence Warrant Officer) and previously served as Chief, Data Base Production Section, J2, U.S. Army Central Command, McDill AFB, Florida. Readers can reach him at (520) 533-1183, DSN 821-1183.

Point of contact: Chief Warrant Officer Four Platt, (520) 533-1183, DSN 821-1183, or PROFS plattj@for3083.

MOS 98D and 98H Merger

It has been tentatively agreed to merge MOS 98D (Emitter Locator/Identifier) with MOS 98H (Morse Interceptor). Those holding MOS 98D will receive a yet-to-be-determined ASI. In November 1995, OCMI will forward this action to Commander, U.S. Army Intelligence Center and Fort Huachuca, for approval. Once approved, this action will take 18 to 24 months to complete.

Point of contact: Master Sergeant Sames, (520) 533-1450, DSN 821-1450, or PROFS sames@for 3083.)

Career Management Field (CMF) 96, Looking to the Future

This CMF has several promising opportunities today and in the future. The bright spots in the CMF continue to be where the growth potential lies, specifically with MOSs 96U (Unmanned Aerial Vehicle (UAV) Operator); 96H (Imagery Ground Station (IGS) Operator); and 97G (Multidiscipline Counterintelligence (MDCI) Analyst). In addition, the entire CMF is under a functionality review. This review may result in several MOS adjustments in MI organizations worldwide. As an example, many force protection positions filled by 96Bs (Intelligence Analysts) may convert to 97G positions.

MOS 96B. MOS 96B continues as the largest MI MOS with projected authorizations of approximately 3,000 soldiers in FY 97. We currently teach the All-Source Analysis System (ASAS) in advanced individual training and the Basic NCO Course. Most future assignments will require the use of ASAS to perform duties. The corps and divisional analysis and control element (ACE) organizations will have a higher representation of intelligence analysts and senior NCO positions, providing increased tactical focus within the MOS.

MOS 96D. MOS 96D (Imagery Analyst) has both good news and bad issues to resolve. With more authorizations for sergeants (SGTs) and staff sergeants (SSGs) than privates first class (PFCs) and specialists (SPCs), promotions have been good in these grades, but at a cost. The Army MOS grading model is shaped like a pyramid; therefore, authorizations for lower enlisted need to exceed junior NCOs which in turn exceed senior NCOs. The 96D model is currently diamond-shaped, with more SGTs and sergeants first class (SFCs) authorizations than the MOS's lower enlisted base can support. This has resulted in SSGs spending years on standing lists for promotion to SFC and lower enlisted soldiers advancing to junior NCO grades with minimum times in grade and service. Although those affected generally view these promotions positively, the developmental time as a SPC and SGT has been sacrificed.

The fix is to grade authorizations to support mobility, growth, and wider assignment diversity—specifically, reduce SFC and SSG authorizations and increase SPC and SGT authorizations. In addition, the Army should increase master sergeant (MSG) authorizations to a level consistent with MOSs of similar strength, roughly 2.5 percent of the MOS. This regrading will result in SPCs and SGTs spending more time in those grades, developing the requisite skills required at higher grades. SSGs should not spend years on standing lists once selected for promotion to SFC. Organizations that once had several SFCs may now have one or two, with an increase in SSG authorizations.

MOS 96H. Another MOS with potential is MOS 96H. This MOS continues to experience growing pains with the defielding of the time tested OV-1D Mohawk and the fielding of IGS. Several 96Hs have felt the discomfort of multiple assignments to Korea as the pool of trained technical observers has dwindled, a result of the fundamental change in the

MOS. At present, the MOS has authorizations for 203 soldiers with a current operating strength of 153, or 75 percent, of those authorized. The current fielding plan calls for 90 IGSs, operated by 6 96Hs each. With a projected end strength of 600 plus, this MOS has potential for promotion and diverse assignment opportunities.

MOS 96R. MOS 96R (Ground Surveillance Systems Operator) continues to be a viable MOS with a small growth in authorizations for FY 97. The UAV-Maneuver system (formerly called close range) will replace the ground surveillance radar systems; however, that is not scheduled until 2005 or later.

MOS 96U. Although MOS 96U is currently experiencing difficulties associated with the Hunter UAV platform, the function of the MOS continues to promise a vital capability to commanders. Once the platform issue is resolved, 96U will offer an exciting opportunity for qualified soldiers with varied assignments and challenging duty positions. Commanders and senior Army leaders continue to support and request support for this important program, from training at the National Training Center, Fort Irwin, California, to contingency deployments world wide.

Point of contact: Sergeant First Class Taylor, (520) 533-1189, DSN 821-1189, or via PROFS taylord@for3083.

CMF 97 Update

As the CMF continues to provide vital intelligence support to commanders, leaders, and decisionmakers, expect changes, challenges, and growth potential. If flexibility is the key to success, expect to be fluid as the Army further refines and defines its missions, roles, and functions.

MOS 97B. Counterintelligence (CI) agents in MOS 97B have recently suffered a promotion slowdown in the mid-level ranks because present strength exceeds authorizations by approximately 300. In the near term, we expect approximately 150 additional authorizations that will help offset promotion stagnation. Most of these positions will be in division support teams.

MOS 97E. Over the next few years, expect no significant changes in Interrogator (MOS 97E) personnel structure or career progression. Interrogators will, however, need to meet the 2/2 language standard required by upcoming changes to **Army Regulation 611-6, Army Linguist Management**.

MOS 97G. In MOS 97G, efforts are underway that may result in the doubling of the MDCI analyst population. Intelligence Analysts (MOS 96B) are filling about 500 positions that can be characterized as force protective instead of projective. Examples include analytic positions in CI analysis sections, garrison Threat Offices, etc. As the 97G is better suited to provide force protection, and MDCI doctrine becomes ingrained, the OCMI is negotiating with Army major commands to convert these selected positions from 96B to 97G.

Point of contact: Master Sergeant Clawson, (520) 533-1995, DSN 821-1995, or via PROFS featherg% hua1.

MOSs 98C and 97B Language Scrub

Staffing continues at the major command level to validate language-indicator-coded (LIC) MOS 98C (Signals Intelligence Analyst) and 97B (Counterintelligence Analyst) positions. LIC positions considered unnecessary will be eliminated. The driving forces behind the validation effort are the high language training costs and low first-term reenlistment rates of skill level I linguists in such non-language-dependent MOSs as 98C and 97B.

Promotion Points for Linguists

The Department of the Army is considering several proposals for awarding promotion points to qualified linguists on promotion standing lists to SGT and SSG. We expect that promotable soldiers will have to attain a minimum score on the Defense Language Proficiency Test (DLPT) to qualify for additional promotion points. This proposal could gain approval for implementation in FY 97.

Minimum Language Proficiency Standards

The revised **Army Regulation 611-6** is now in final preparation for publication. The new regulation requires linguists to maintain a 2/2 DLPT score to remain qualified as a linguist. PERSCOM has authorization to grant waivers as warranted. Linguists should expect a phased implementation to begin early in 1996.

Point of contact: Mr. Delajoux, (520) 533-1453, DSN 821-1453, or PROFS delajoux@for3083.

Senior Officer Logistics Management Course

The U.S. Army Armor School offers the Senior Officer Logistics Management Course (SOLMC) for majors, lieutenant colonels, and colonels in command or maintenance positions from battalion through brigade. The one-week course gives senior leaders the tools they need to succeed in the maintenance and supply arenas. The course provides instruction on the ULLS supply and maintenance functions with which senior material managers need to be familiar. SOLMC furnishes overviews covering safe operations, maintenance indicators, preventive maintenance, and lessons learned for Army common equipment. Participants can individually tailor the course because it offers a core section plus a number of electives. There are 12 one-week iterations of the course per year. For more information on the SOLMC call (502) 624-7133/8152 or DSN 464-7133/8152.

RESERVE COMPONENT

Reserve Component MI Officer Training

Currently the Reserve Component (RC) military intelligence (MI) officer will receive the area of concentration (AOC) designator 35D upon successful completion of the MI Officer Basic Course (MIOBC). Branch-transferred RC officers must attend the RC MI Officer Transition Course (RC-MIOTC). The Army awards the 35D AOC designator upon completion of the RC-MIOTC. Officers must be graduates of either the MIOBC or the RC-MIOTC in order to attend the RC-MI Officer Advanced Course (RC-MIOAC).

The RC-MIOTC teaches the same 24 basic lieutenants tasks taught in MIOBC. The RC-MIOTC gives RC officers the 35D designation so that they can go back to their units and serve as qualified 35Ds. The original purpose was to transition officers from other branches into MI, so they could follow up with the MIOAC to branch transfer.

The 6th Reserve Forces School-Intelligence (RFS-I) located at Fort Huachuca, Arizona, teaches the RC-MIOTC. The U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH), the MI proponent, has approved the use of mobile training teams (MTTs), based out of the 6th RFS-I, to export the training under specific circumstances. The RC-MIOTC has two phases. The first is taught through correspondence courses and Phase II is in-residence.

- ☐ Phase I comprises 24 correspondence subcourses (122 hours). The subcourses include 2 subcourses designed by the Infantry School, 5 inter-Service subcourses, and 17 MI-specific subcourses. Training in this phase is progressive and sequential. Officers must complete Phase I before attending Phase II.

Upon completion of Phase II, RC officers will be MI branch (35) qualified.

- ☐ Phase II, a two-week resident phase, taught by the 6th RFS-I, provides practical application of the basic MI skills learned in Phase I. This phase consists of 83 hours of instruction broken down into conferences and practical exercises (PE). The PEs focus on intelligence estimates, intelligence processing, and reconnaissance and surveillance.

The design of the RC-MIOAC provides branch training and a working knowledge of the duties and responsibilities of MI officers in company command, battalion and brigade S2, and all-source intelligence officers serving at any echelon. The RC-MIOAC is a two-phase course:

- ☐ Phase I is 6 common core and 3 MI-specific (58 hours). Training in this course is progressive and sequential. Officers must complete Phase I before attending Phase II.
- ☐ Phase II, a two-week resident phase (84 hours), concentrates on Military Qualification Standards-II (MQS-II) captains tasks). Upon completion of Phase II, RC officers will be MI branch (35) qualified.

Point of contact: Major Tom Bergfeld, (520) 533-2085, DSN 821-2085, or bergfelt%hua1@huachuca-emh11.army.mil.

ARNG G2/S2 Conference

The USAIC&FH hosted the annual Army National Guard (ARNG) G2/S2 Workshop at Fort Huachuca on 20-21 October 1995. The latest Total Army Analysis (TAA) will put 15 new MI companies into the ARNG structure to support the designated Enhanced Brigades. The TAA also adds seven cadre division MI battalions in addition to the existing full-up 629th MI Battalion (Maryland ARNG). The workshop focused on the new force structure and its staffing, training, and equipping implications. Electronic connectivity, automated analysis capability, and tactical intelligence and electronic warfare equipment were items of particular concern.

Point of contact: Major(P) Steve Ponder, (520) 533-1177, DSN 821-1177, or ponders%hua1@huachuca-emh11. army.mil.)

Colonel John Craig is Chief, Reserve Forces Office. Major Steve Ponder is the ARNG advisor. Readers can contact them at (520) 533-1176/7, DSN 821-1176/7, or FAX DSN 821-1762. Colonel Craig's PROFS/E-mail address is craigj%hua1@huachuca-emh11.army.mil.

Maintenance Officer Course

The U.S. Army Armor School's Battalion Maintenance Officer Course (BMOC) is not just for combat arms officers but military intelligence officers too.

The four-week BMOC prepares lieutenants, captains, and maintenance warrant officers for battalion and brigade maintenance assignments. The instruction includes: unit maintenance operations, material condition status reporting, prescribed load list management, safety programs, hazardous material policies and procedures, automotive and electrical principles, recovery, and scheduled services. Officers also receive the latest instruction on the Unit Level Logistics System (ULLS) maintenance and supply functions in the school's two fully equipped computer labs. Fifteen classes are available per year. For more information on BMOC call (502) 624-8119/7637, DSN 464-8119/7637, or E-mail bakerj@knox-emh1.army.mil.

MOS. At present, the MOS has authorizations for 203 soldiers with a current operating strength of 153, or 75 percent, of those authorized. The current fielding plan calls for 90 IGSs, operated by 6 96Hs each. With a projected end strength of 600 plus, this MOS has potential for promotion and diverse assignment opportunities.

MOS 96R. MOS 96R (Ground Surveillance Systems Operator) continues to be a viable MOS with a small growth in authorizations for FY 97. The UAV-Maneuver system (formerly called close range) will replace the ground surveillance radar systems; however, that is not scheduled until 2005 or later.

MOS 96U. Although MOS 96U is currently experiencing difficulties associated with the Hunter UAV platform, the function of the MOS continues to promise a vital capability to commanders. Once the platform issue is resolved, 96U will offer an exciting opportunity for qualified soldiers with varied assignments and challenging duty positions. Commanders and senior Army leaders continue to support and request support for this important program, from training at the National Training Center, Fort Irwin, California, to contingency deployments world wide.

Point of contact: Sergeant First Class Taylor, (520) 533-1189, DSN 821-1189, or via PROFS taylord@for3083.

CMF 97 Update

As the CMF continues to provide vital intelligence support to commanders, leaders, and decisionmakers, expect changes, challenges, and growth potential. If flexibility is the key to success, expect to be fluid as the Army further refines and defines its missions, roles, and functions.

MOS 97B. Counterintelligence (CI) agents in MOS 97B have recently suffered a promotion slowdown in the mid-level ranks because present strength exceeds authorizations by approximately 300. In the near term, we expect approximately 150 additional authorizations that will help offset promotion stagnation. Most of these positions will be in division support teams.

MOS 97E. Over the next few years, expect no significant changes in Interrogator (MOS 97E) personnel structure or career progression. Interrogators will, however, need to meet the 2/2 language standard required by upcoming changes to **Army Regulation 611-6, Army Linguist Management.**

MOS 97G. In MOS 97G, efforts are underway that may result in the doubling of the MDCI analyst population. Intelligence Analysts (MOS 96B) are filling about 500 positions that can be characterized as force protective instead of projective. Examples include analytic positions in CI analysis sections, garrison Threat Offices, etc. As the 97G is better suited to provide force protection, and MDCI doctrine becomes ingrained, the OCMI is negotiating with Army major commands to convert these selected positions from 96B to 97G.

Point of contact: Master Sergeant Clawson, (520) 533-1995, DSN 821-1995, or via PROFS featherg% hua1.

MOSs 98C and 97B Language Scrub

Staffing continues at the major command level to validate language-indicator-coded (LIC) MOS 98C (Signals Intelligence Analyst) and 97B (Counterintelligence Analyst) positions. LIC positions considered unnecessary will be eliminated. The driving forces behind the validation effort are the high language training costs and low first-term reenlistment rates of skill level I linguists in such non-language-dependent MOSs as 98C and 97B.

Promotion Points for Linguists

The Department of the Army is considering several proposals for awarding promotion points to qualified linguists on promotion standing lists to SGT and SSG. We expect that promotable soldiers will have to attain a minimum score on the Defense Language Proficiency Test (DLPT) to qualify for additional promotion points. This proposal could gain approval for implementation in FY 97.

Minimum Language Proficiency Standards

The revised **Army Regulation 611-6** is now in final preparation for publication. The new regulation requires linguists to maintain a 2/2 DLPT score to remain qualified as a linguist. PERSCOM has authorization to grant waivers as warranted. Linguists should expect a phased implementation to begin early in 1996.

Point of contact: Mr. Delajoux, (520) 533-1453, DSN 821-1453, or PROFS delajoux@for3083.

Senior Officer Logistics Management Course

The U.S. Army Armor School offers the Senior Officer Logistics Management Course (SOLMC) for majors, lieutenant colonels, and colonels in command or maintenance positions from battalion through brigade. The one-week course gives senior leaders the tools they need to succeed in the maintenance and supply arenas. The course provides instruction on the ULLS supply and maintenance functions with which senior material managers need to be familiar. SOLMC furnishes overviews covering safe operations, maintenance indicators, preventive maintenance, and lessons learned for Army common equipment. Participants can individually tailor the course because it offers a core section plus a number of electives. There are 12 one-week iterations of the course per year. For more information on the SOLMC call (502) 624-7133/8152 or DSN 464-7133/8152.

RESERVE COMPONENT

Reserve Component MI Officer Training

Currently the Reserve Component (RC) military intelligence (MI) officer will receive the area of concentration (AOC) designator 35D upon successful completion of the MI Officer Basic Course (MIOBC). Branch-transferred RC officers must attend the RC MI Officer Transition Course (RC-MIOTC). The Army awards the 35D AOC designator upon completion of the RC-MIOTC. Officers must be graduates of either the MIOBC or the RC-MIOTC in order to attend the RC-MI Officer Advanced Course (RC-MIOAC).

The RC-MIOTC teaches the same 24 basic lieutenants tasks taught in MIOBC. The RC-MIOTC gives RC officers the 35D designation so that they can go back to their units and serve as qualified 35Ds. The original purpose was to transition officers from other branches into MI, so they could follow up with the MIOAC to branch transfer.

The 6th Reserve Forces School-Intelligence (RFS-I) located at Fort Huachuca, Arizona, teaches the RC-MIOTC. The U.S. Army Intelligence Center and Fort Huachuca (USAIC&FH), the MI proponent, has approved the use of mobile training teams (MTTs), based out of the 6th RFS-I, to export the training under specific circumstances. The RC-MIOTC has two phases. The first is taught through correspondence courses and Phase II is in-residence.

- ☐ Phase I comprises 24 correspondence subcourses (122 hours). The subcourses include 2 subcourses designed by the Infantry School, 5 inter-Service subcourses, and 17 MI-specific subcourses. Training in this phase is progressive and sequential. Officers must complete Phase I before attending Phase II.

Upon completion of Phase II, RC officers will be MI branch (35) qualified.

- ☐ Phase II, a two-week resident phase, taught by the 6th RFS-I, provides practical application of the basic MI skills learned in Phase I. This phase consists of 83 hours of instruction broken down into conferences and practical exercises (PE). The PEs focus on intelligence estimates, intelligence processing, and reconnaissance and surveillance.

The design of the RC-MIOAC provides branch training and a working knowledge of the duties and responsibilities of MI officers in company command, battalion and brigade S2, and all-source intelligence officers serving at any echelon. The RC-MIOAC is a two-phase course:

- ☐ Phase I is 6 common core and 3 MI-specific (58 hours). Training in this course is progressive and sequential. Officers must complete Phase I before attending Phase II.
- ☐ Phase II, a two-week resident phase (84 hours), concentrates on Military Qualification Standards-II (MQS-II) captains tasks). Upon completion of Phase II, RC officers will be MI branch (35) qualified.

Point of contact: Major Tom Bergfeld, (520) 533-2085, DSN 821-2085, or bergfelt%hua1@huachuca-emh11.army.mil.

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PATHFINDER

(Continued from page 35)

- ☐ Elimination of dependence on any single commercial software program.
- ☐ Ability to operate on multiple software configurations, to the extent possible.
- ☐ Availability over the U.S. intelligence community's Open-Source Network and MOSAIC-Intelink.

Other goals include—

- ☐ Continued emphasis on training, and offer of additional courses if funding permits.
- ☐ Doubling once again of the user base to more than 600.
- ☐ Moving to a real-time, operationally oriented functionality is also an important near-term goal.

A Pathfinder Success Story

The comparison of merged 1990 and 1994 Iraqi deployment databases, made possible by Pathfinder, showed the two sets of data clustered separately. This indicated that the two events, although similarly motivated, were dissimilar, and that Saddam Hussein's intentions were much more limited this second time around. NGIC analysts were also able to provide a list of specific indicators from the 1990 attack that would not have been evident without use of Pathfinder's advanced analytical tools. If the system's current capabilities had been available in the summer of 1990, it is possible that analysts could have provided earlier and more specific warnings of the Iraqi invasion of Kuwait.

Major Knapp is currently the Automatic Data Processing Systems Manager for NGIC's Foreign Materiel Directorate. Readers can reach him at (804) 980-7479 or DSN 934-7479.

Mr. Hendrickson is the Program Manager of the Project Pathfinder Team and a senior analyst in NGIC's Acquisition Strategies Division. He represents NGIC in the National Open Source Program and other analytical automation groups. Readers can contact him at (804) 980-7242, DSN 934-7242, or via his E-mail address thendri@ngic.osis.gov.

LETTERS

(Continued from page 5)

readily admit that their explanations of events are simplistic to the point of being ludicrous, but they ask us to judge their work not by the realism of their models, but by the accuracy of their predictions.[7] Certainly all of us could use a crystal ball. However, when quantitative theorists claim to predict the future, intelligence professionals have every reason to be skeptical.

Quantitative forecasts often appear successful because, after a certain point, the outcome of any given event does indeed become predictable. As Sun Tzu put it, *"To hear the thunderclap is no indication of acute hearing."*[8] However, if one wishes to control one's own destiny, one must learn to act well before this point has arrived. One must learn not merely to make decisions, or even to predict the decisions of others, but to set the stage on which all decisions will be made.

Captain Resch discusses the near failure of theorists to predict the end of the Cold War. However, we observe that George Kennan's "X Article," published in 1947, clearly foresaw the possibility that a power with the economic weakness, ideological expectations, and over-extended military commitments of the Soviet Union might collapse internally. Furthermore, Kennan did not merely predict how the Cold War would end, he proposed a philosophy of foreign policy designed to ensure that it would end benignly. Kennan's insight came not from the use of a rigid methodology, but from the wisdom gained through an understanding of history.

In order to defend the relevance of their predictive approach, most quantitative theorists refuse to admit that it is possible for us to take this kind of active role in shaping history. Captain Resch states that "respected historians" agree that "major historical events" would have varied little with different actors.[9] Although it is difficult to respond to such vague claims by unspecified authors, we find the first chapters of Liddell Hart's **Defense of the West** relevant. Hart discusses the French collapse in 1940, the German defeat after Stalingrad, and the success of the Normandy invasion, noting that every time, there was a point when the leaders of the losing side could have turned defeat into victory simply by following a different strategic policy. If Hart is correct, these leaders could have changed the outcome of World War II.

Captain Resch also asserts that *"switching Generals Robert E. Lee and 'Stonewall' Jackson with Ulysses S. Grant and William Tecumseh Sherman would not have caused a different end state for the Civil War."*[10] Perhaps not. However, it might be more pertinent to ask what would have happened if one had switched Abraham Lincoln and Jefferson Davis. With his simplistic historical analysis, Captain Resch may inadvertently point to the weakness of his own predictive technique. Formal modeling can affirm the fact that broad trends will lead to their inevitable results, but it cannot provide the depth of explanation necessary to determine how those trends began, or how to change them.

Captain Resch does the opponents of quantitative analysis a disservice by labeling them as that *"large segment of the community"* which *"detests science, statistics, and theory."*[11] We opponents of the quantitative method value objective techniques as much as those supposedly "scien-

tific" analysts who practice formal modeling. In fact, we insist that our theories conform to the facts of the material world in a way that quantitative models cannot. We feel that there is an older science of war, which is as rigorous and objective as any other discipline. This is the logical science of determining what one's nation and its potential enemies can do—we do not wish to lose it to academic fashion.

Captain Resch began and concluded with a worthwhile point. Military professionals may gain useful insights from the writings of academic scholars. Academia has a wealth of invaluable sources to offer our community, but we must remember that within this body of knowledge there also lies writing that is worse than useless.

Endnotes:

1. The **New International Encyclopedia**, 1911, 201.
2. For a fine treatment of this episode, see Roger Parkinson's **Clausewitz** published in 1971.
3. Consult pages 3 through 13 of B. H. Liddell Hart's **Defense of the West**, 1950.
4. Cited on page 11 of Colonel Harry G. Summers' **On Strategy: The Vietnam War in Context**, 1981.
5. Colin Gray's **Strategic Studies**, 1982, 129, 130.
6. Klaus Knorr and James N. Rosenau, editors, **Contending Approaches to International Politics**, 1969, 31.
7. Anthony Downs, **An Economic Theory of Democracy**, 1957, 21.
8. Sun Tzu (translated by Yuan Shibing), **Sun Tzu's Art of War**, 1987, 101.
9. Captain David Resch, "Predictive Analysis," ***Military Intelligence Professional Bulletin***, April-June 1995, 27.
10. Ibid.
11. Ibid, op. cit., 26.

First Lieutenant Kevin Falk, USAR, and Thomas M. Kane
Claremont, California

The Knowlton Award

The Military Intelligence Corps Association (MICA) has selected Lieutenant Colonel Thomas Knowlton as the Military Intelligence Corps hero. Who was Lieutenant Colonel Knowlton? During the American Revolution, Lieutenant Colonel Knowlton commanded "Knowlton's Rangers," the first intelligence and reconnaissance unit in the United States. The creation of this unit is widely regarded as the birth of American Intelligence.

The Knowlton Award consists of a silver medallion, attached to a teal blue ribbon worn around the neck. The MICA is currently presenting Knowlton Awards to worthy individuals, both military and civilians of all grades, within the Military Intelligence Corps. Nominees must have demonstrated an outstanding degree of professional competence and contributed in a significant way to the improvement of military intelligence. A MICA member must submit the nomination. Any Active or Reserve Component G2; MI commander with the rank of lieutenant colonel, colonel, or general officer; or installation senior intelligence officer (SIO) may approve the award.

The Chief, Military Intelligence Corps, has approved the wearing of the award at functions specifying the Army dress blue uniform or civilian equivalent.

Units can obtain information on the Knowlton Award and the MICA by writing the Military Intelligence Corps Association, ATTN: Hero Committee, P.O. Box 13020, Fort Huachuca, AZ 85670-3020; or through the Fort Huachuca Internet Homepage (http://huachuca-usaic.army.mil/homepage.html) on the Worldwide Web .

PROFESSIONAL READER

The Devil's Anvil: The Assault on Peleliu by James H. Hallas (Westport, Connecticut: Praeger Publishers, 1994).

In mid-September 1944, the U.S. 1st Marine Division assaulted a small Pacific island named Peleiu in order to clear a line of attack for General Douglas MacArthur's return to the Philippines. The Division Commander, Major General William Rupettus, expected a quick two day victory. Instead, American forces struggled desperately for more than two months against a deeply entrenched enemy determined to fight to the death. The result was one of the most costly battles of the Pacific war, as well as one of the most forgotten.

I highly recommend **The Devil's Anvil** for anyone interested in World War II military history. By relying heavily on the oral accounts of survivors, Hallas paints a particularly vivid portrait of a very violent struggle accentuated by many individual acts of heroism. The only true deficiency of this book is a lack of explanatory maps and other visual aids. Although the complexity of action during the battle occasionally makes for difficult reading, **The Devil's Anvil** is certainly worth the effort.

Second Lieutenant Richard L. Davis
Fort Huachuca, Arizona

Payoff Artillery-WWII by Frank H. Armstrong (Vermont: Bull Run Publishing, Inc., 1993).

If you are looking for a book to get smart on Field Artillery as an intelligence officer, then **Payoff Artillery-WWII** is not the book. However, if you enjoy reading small unit histories, this might be your kind of book. **Payoff Artillery-WWII** reads very quickly, perhaps too quickly for my liking.

The book centers on a young Frank Armstrong's life through the Depression, joining the Army, and life as a forward observer for a highly successful field artillery battalion in the European Theater of Operations during World War II.

Armstrong's story moves rapidly through a myriad of topics: 207 topics in 7 chapters, in a mere 162 pages. Many topics are laced with "I did not know that" facts. For instance: How many board feet of lumber the U.S. war effort took, how many Liberty ships were built, and how many women were in the Army in 1939. I am not sure of the relevance of some of these facts, yet they are interesting.

Unfortunately, the topics are too short for a continuous train of thought because Mr. Armstrong relates many interesting subjects. One in particular is a story of a direct fire artillery dual between a 105mm US Army battery and an element of 88 German artillery pieces. The American artillery came out winner with only one causality and the German unit either destroyed or captured. This battle covers a scant page and half.

Unfortunately, **Payoff Artillery-WWII** provokes more questions than informs or answers. The book never relates the details I would expect of a personal account. The dizzying array of topics

leaves the reader wondering what exactly the author wanted to portray.

Captain Packard Mills
Fort Hood, Texas

Science in Russia and the Soviet Union by Loren R. Graham (New York: Cambridge University Press, 1993) 321 pages.

Science in Russia and the Soviet Union is a comprehensive look at the development and application of science and technology across 300 years of Russian and Soviet history. Graham begins by looking into the development of scientific research during the reign of Peter the Great. In Peter's time, Western Europe began to organize scientific research, taking it from the private labs of noblemen and establishing academies to administer research in the interests of the rulers. Peter desired to copy this arrangement as part of his general modernization of imperial Russia.

Graham describes in great detail the organizational and cultural problems Peter faced while trying to modernize Russia. Here Graham encounters a real problem, one that continues through the book. He wanders between describing Russian and Soviet scientists and their accomplishments and portraying the various organizational models that attempted to tie their work together. After introducing the topic of Peter's difficulties in modernizing Russia, Graham describes in almost numbing detail the day-to-day life of the Russian science bureaucracy. With the exception of a brief description of Mendeleev's development of the periodic table, Graham treats the reader to exhaustive (and probably unnecessary) detail about academic politics.

The same problem haunts the book to its end. The Soviet era gives Graham a new chance to revel in office warfare while only occasionally mentioning the real warfare occurring during the Russian Revolution and the Russian Civil War. The significant exception is an interesting account of Lysenkoism. Graham tells the strange story of Trofim Lysenko, a poorly educated agronomist whose bizarre theories of plant breeding meshed perfectly with Stalin's desire to weaken the power of the scientific establishment in the Soviet Union. On Stalin's orders, Lysenko's theories became the only accepted version of genetics in the USSR. As Stalin increased his control over Soviet scientists (those who survived), Lysenko called most of the shots in Soviet agriculture, and the citizens of the USSR watched crop yields drop steadily.

Sadly, this worthy account is an exception, and the remainder of the book, again, details office politics and bureaucratic maneuvering. This is a shame, from the point of view of an intelligence officer. Concerning topics of professional interest such as nuclear weapons, communications, computers, and aerospace, Graham has very little to say. He describes the secret police chief Lavrenti Beria's management of the Soviet nuclear weapons program, saying little of the program itself. To his credit, he does mention physicist Andrei Sakharov's long fight against the Soviet government. Of telecommunications, Graham says nothing at all. The book's brief photo section shows pictures of a Soviet computer system, which he fails mention in the text. Graham omits any mention of air and space travel.

While Graham examines his topics in excruciating detail, I found his choice of topics so limiting making the book of little professional value—and of less personal interest.

Major Christopher E. Hilliard
Fort Huachuca, Arizona

Napoleon's Last Victory and Emergence of Modern War by Robert M. Epstein, with a Forward by Russell F. Weigley (Lawrence, Kansas: University Press of Kansas, 1994).

Robert Epstein's **Napoleon's Last Victory** is an interesting but flawed work. Occasionally, book reviewers resort to the old cliché that a book has weaknesses but still "makes a valuable contribution to the literature." In the case of Epstein's book, the cliché has real value because although he fails to convincingly prove his main argument, he raises questions and makes contributions to a debate that will surely improve the understanding of Napoleonic warfare at the operational level.

Epstein's topic is Napoleon's campaign against Austria in 1809. The author does not explore many new sources nor does he claim to cover the campaign in any more detail than previous accounts (for example, Petre or Arnold). Instead, Epstein proposes that the campaign deserves reexamination as a major turning point in the development of warfare. He asserts that traditional accounts of Napoleonic warfare that treat the period from 1796 to 1815 as a single entity fail to perceive a major change in the way war is conducted which occurred in the 1809 campaign. Epstein further claims that the 1809 campaign marks the emergence of "modern" war (pages 3-7).

To prove his point, Epstein defines "modern" war (pages 4 and 171), gives a brief background on the changes in warfare prior to 1809, and then chronologically describes the war with Austria with a particular emphasis on the operational connection between the Italian and Danube theaters. An important element of Epstein's argument is that both sides employed the corps system for the first time in 1809, thus marking a key point in the move towards modern war.

Unfortunately, Epstein's argument is flawed on two basic points: first, his definition of modern war is somewhat artificial; and second, too much of the book is devoted to a narrative of the 1809 campaign without comparing this campaign with warfare before and after 1809. The author's second point is particularly troublesome because the author's own thesis demands that Napoleon's 1809 struggle with Austria be compared with other campaigns to establish it as a true watershed; and yet, Epstein includes only one chapter on the changes in warfare from 1789 to 1809 and almost nothing on events after Wagram.

Epstein's definition of modern war includes the use of a strategic plan that integrates multiple theaters of war, full mobilization of state resources, opposing symmetrical armies raised by conscription, units organized into corps and using distributed maneuver, decentralized command and control, and a common doctrine. Of course, any definition of modern war is likely to spark debate; historians have not created an "accepted" view of the term. However, Epstein's definition seems particularly arbitrary. For example, armies do not have to be symmetrical to be modern; but the author needed to include this characteristic to make the corps system. Also, the concept of full mobilization of the state's resources is certainly a modern aspect of war. However, most historians agree that "full" mobilization is a relative term and that the French Revolution is merely a step toward a greater mobilization (with 1809 having no particular significance). Finally, Epstein leaves out aspects that many scholars would include in a definition of modern war such as technology and the rise of professional staff systems.

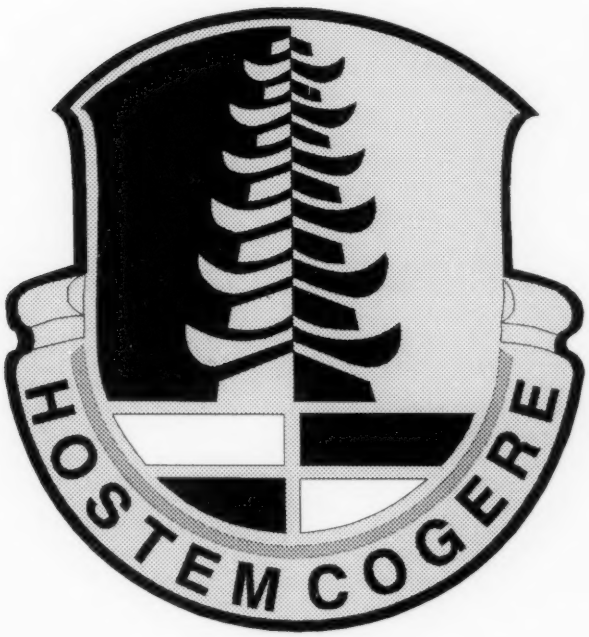
Even in those areas of Epstein's "modern war" that historians generally accept, the author fails to provide enough comparisons with events before and after 1809 to effectively establish his case. For example, the Napoleonic era did witness the first extensive use of conscription. The author mentions that the French adopted conscription as part of the levee en masse in 1793, but he implies that 1809 is a true watershed because the Austrians also had conscription. Not only is this the specious "symmetry" argument, but Epstein does not cover the many variations in conscription that occur in the major European countries after 1809. First, Russia and Great Britain never adopt conscription during the Napoleonic wars. Second, the Austrian use of Landwehr in 1809 was late and haphazard; few of the conscripted soldiers fought with Charles' army and most became irregulars fighting on the fringe areas of the campaign or acting as garrisons. Only the Prussians adopted an effective conscription system which they were not able to use until 1813. In fact, the Prussian use of conscription in 1870 against the French who used, in large part, a volunteer professional army demonstrates that 1809 was simply not a major shift in the way that nations recruited their soldiers.

The flaws in Epstein's argument do not mean that his book is not worth reading. On the contrary, Epstein reinforces the key concept that the operational art was created in the Napoleonic period by using the corps system, and he persuasively contends that the 1809 was a major point in the development of that system. He is especially effective at integrating the events in the Italian theater with the main struggle on the Danube. I would recommend this book to any officer interested in the origins of the operational art of war and to the soldier-scholar interested in a unique, if imperfect look at the debate over the revolution in warfare that marked the Napoleonic period.

Major Curtis S. King
West Point, New York

319th Military Intelligence Battalion (Opns) (Abn)

50 Years



The Korean temple of the 319th Military Intelligence Battalion crest represents the unit's decoration and battle service in the Pacific Area. Teal blue and yellow are the colors used for military intelligence (MI) units. The black and white quartered base comes from the Arms of the City of Bad Swalbach, site of the unit's original activation. The unit's motto, "Hostem Cogere," means "Know the Enemy."

The 319th Military Intelligence (MI) Battalion (Operations) (Airborne), 525th MI Brigade, XVIII Airborne Corps, traces its lineage to the activation of the 319th MI Headquarters Detachment on 1 August 1945 at Bad Swalbach, Germany, where it served as an interrogation unit for German prisoners of war. In December 1946, the 319th MI Company deployed to Japan and began a long association with the orient. While in Japan, it was joined by other interrogation units which had served in the Philippines in 1944. In September 1952, the unit reorganized as the 319th Military Intelligence Service Company. After 13 months of inactivation, the unit, redesignated the 319th MI Battalion, reactivated at Fort George G. Meade, Maryland. Later, the reformed 319th served in the Korean War.

After deactivation in Hawaii in 1968, the battalion was reactivated on 1 April 1982 at Fort Bragg, North Carolina, as a subordinate of the 525th MI Brigade. Its mission is to provide all-source predictive intelligence, electronic warfare, and battlefield deception support to the XVIII Airborne Corps.

Since its reactivation, the battalion has participated in all contingency operations conducted by the XVIII Airborne Corps. In October 1983, 319th MI Battalion soldiers deployed to Grenada for Operation URGENT FURY. In September 1987, elements of the battalion participated in the emergency deployment to Honduras, Operation GOLDEN PHEASANT, to counter an incursion by Nicaraguan forces. In December 1989 and January 1990, elements of the battalion provided intelligence support from Fort Bragg and Panama during Operation JUST CAUSE. The entire 319th MI Battalion deployed to Saudi Arabia for Operations DESERT SHIELD and DESERT STORM. During Operation UPHOLD DEMOCRACY in September and October 1994, the battalion deployed and provided intelligence to the joint task forces and their subordinate elements in Haiti. As part of the U.S. Army's rapid-deployment contingency corps, the 319th frequently has personnel on temporary duty to various overseas locations and stands ready to deploy worldwide on short notice. **Hostem Cogere!**

Commander
U.S. Army Intelligence Center & Fort Huachuca
ATTN: ATZS-TDL-B (12)
Fort Huachuca, AZ 85613-6000

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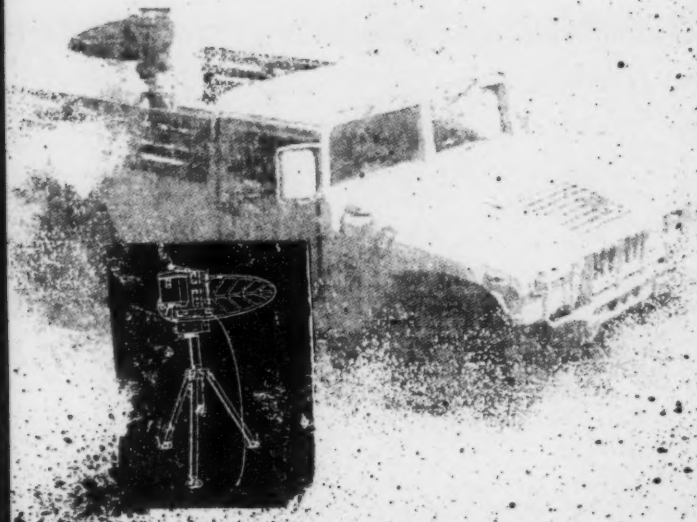

Maiden Voyage of a TEAMMATE
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Headquarters, Department of the Army.
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